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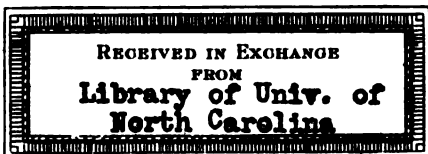
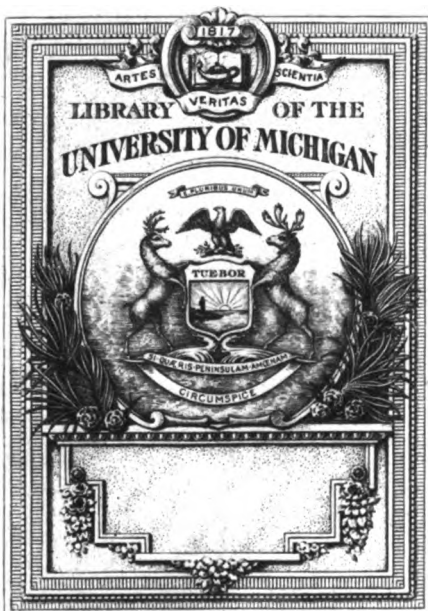
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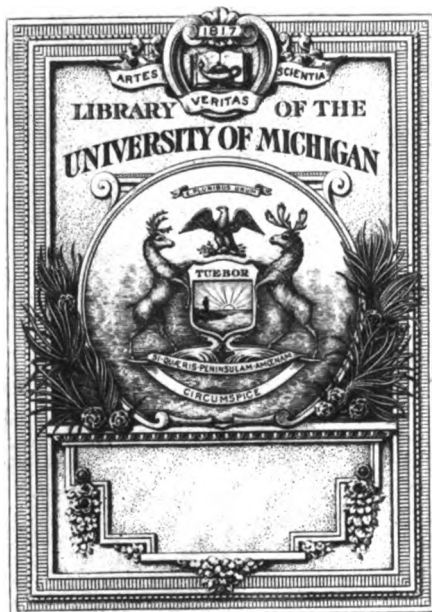
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APPENDIX
TO THE
HOUSE JOURNAL
OF THE
Forty-Fourth General Assembly
OF THE
STATE OF TENNESSEE, *General assembly. House*
FIRST SESSION, 1885.

PUBLISHED BY AUTHORITY.

NASHVILLE:
ALBERT B. TAVEL, PRINTER TO THE STATE.
1885.

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MESSAGE
OF
GOV. WM. B. BATE
TO THE
FORTY-FOURTH GENERAL ASSEMBLY
OF TENNESSEE,
MONDAY, JANUARY 12, 1885.

NASHVILLE:
ALBERT B. TAVEL, PRINTER TO THE STATE
1885.

Each
Silver
Union City
Nashville
6-17-1884

MESSAGE.

Gentlemen of the Senate and House of Representatives:

You meet under auspicious circumstances as representatives of a prosperous and contented people, and have weighty duties to perform in the enactment of laws to conserve the general good. It is my duty, as it is a pleasure, in obedience to the Constitution of the State, to make such recommendations to the General Assembly, as may be deemed expedient.

FINANCES.

The reports of the Comptroller and Treasurer will be found to contain able and exhaustive presentations of the financial condition of the State, set forth in comprehensive detail, and worthy of your close investigation. These reports show the amount of receipts, from all sources, for two years ending December 19, 1884, inclusive, to be \$2,346,353.94, which includes a balance of \$246,790.76 turned over to Atha Thomas, Treasurer, by the M. T. Polk Investigating Committee. This total also includes the total net amount of revenue collected and paid into the Treasury by the State's attorneys on back tax collections, amounting to \$157,401.64. This back-tax account is a source of revenue upon which we cannot rely so much in future, inasmuch as a large portion of such taxes collectable have already been collected and turned in.

The disbursements for the two years ending December 19, 1884, amount to \$1,701,139.11, leaving a balance in the Treasury at that date of \$645,214.83. This balance (\$645,214.83) includes \$139,473.80 of new issue of Bank of Tennessee certificates, and old issue Bank of Tennessee money, which leaves \$505,741.83 in actual available funds in the Treasury, less \$21,141.41 in controversy in the Mechanics' (or Mechanics' National) [Bank of Knoxville.

Included in this disbursement is the sum of \$250,313.92 interest on State debt paid from December 20, 1882, to December 19, 1884, inclusive. From the ratio at which the bonds are now being funded, we may reasonably expect a much larger increase upon the amount of interest that has to be paid on the bonded indebtedness.

The Comptroller's books show in their warrant account, that the warrants outstanding December 19, 1882, amounted to \$114,830.06; amount of warrants issued, from December 19, 1882, to December 19, 1884, inclusive, \$1,766,207.15. The total amount of warrants paid (disbursements) from December 19, 1882, to December 19, 1884, inclusive, was \$1,765,072.38, which leaves a balance of warrants outstanding (not yet presented), at the latter date, of \$115,964.83.

APPROPRIATIONS.

The tabular statement presented by the Comptroller, showing the amount of appropriations for two years to March 19, 1885, contains the following interesting facts: Amount remaining from appropriations of the previous term and undrawn December 20, 1882, was \$176,752.15; amount appropriated by General Assembly 1883-84, for the two years, was \$1,684,899.45, equivalent to the sum of \$842,449 83, to meet the expenses of the State each year.

The appropriations under special acts, not included in the general appropriation bill, drawn up to December 19, 1884, amount to \$337,872.33, which includes the extraordinary appropriations for interest on State debt (\$250,313.92); hospital for insane, East Tennessee (\$69,931.29); deficit of hospital for insane, Middle Tennessee (\$25,000), made to cover current expenses of said institution to December 19, 1882, and which the Legislature of 1881-2 failed to make provisions for, hence the last Legislature was necessitated to provide for it; arrest of ex-Treasurer M. T. Polk (\$10,000), together with the salaries of the judges of Referee Courts, and of the Railroad Commissioners, which have not heretofore been required to be paid, all of which, constituting an unusual expense, will be seen in detail in the Comptroller's report. This makes the total appropriations (for the two years) drawn up to December 19, 1884, amount \$1,766,207.15, and leaving undrawn December 19, 1884, the sum of \$151,834.19. While this sum remains undrawn other matters of appropriation have fallen short of the amount named in the general appropriation bill to effect the object intended, \$26,886.60 for criminal prosecutions, and about \$17,000 for other purposes therein named, as is fully shown in the Comptroller's report, and should be provided for.

BONDED INDEBTEDNESS.

The obligations of the State which are ahead of us, and which will have to be met under the terms of the law relative to the settlement of the State debt as per act of 1883, and, as appears in greater detail below, at the time the work of funding commenced in July, 1883, according to closest calculation, amounted to \$28,786,066.39, including principal and interest. Of this amount the "State Debt Proper" bonds (interest on which cannot be accurately ascertained, for the reason that the bonds have varying numbers of coupons upon them, and which cannot be ascertained until they are presented for funding) amount to \$2,135,150; educational, charitable and other bonds, that along with "State Debt Proper" bonds are by the act of 1883, six per cent. bearing bonds) amounting to \$648,000 (on which last named bonds six per cent. interest has been paid currently up to date, shows that there is \$2,783,150 on which the State will have to pay six per cent. interest, not estimating unascertained interest as aforesaid.

Deduct, then, this latter amount (\$2,783,150) from the total bonded indebtedness (\$28,786,066.39), leaves \$26,002,916.39, and taking fifty per cent. thereof (principal and interest), it will be seen that there will yet remain, \$13,001,458.19, upon which the State will have to pay three per cent. interest. This makes the total bonded indebtedness of the State (all bonds included) under operation of act of 1883, about \$15,784,608.19.

THE FUNDING BOARD.

The Funding Board began its tedious and laborious operations in July, 1883. Since that time, as will fully appear below, the total bonds funded, amounted to \$3,090,215.39, leaving unfunded to date of report (January 1, 1885), \$20,695,851.00. Based on this calculation it will be seen that, upon the theory that all of the bonds are presented for funding, the State in the end will have to pay \$492,399 interest annually on the whole amount of the State's indebtedness, and in proportion thereto as the bonds are annually funded, unless some of the outstanding obligations should be otherwise disposed of. For those already funded the State has to pay annually \$154,140 interest.

I beg, however, to submit as explicitly as I can the amount of original indebtedness absorbed by funding the old bonds into New

Settlement Bonds, together with the amount of the latter issued in lieu thereof.

The following statement will show the amount of bonds funded under the act of March 15, 1883:

"STATE DEBT PROPER"—SIX PER CENT BONDS.

Green "C," 127 Bonds, \$1000 each	\$127,000
Green "F," 238 " " "	238,000
Green, no letter, 26 " " "	26,000
White, no letter, 79 " " "	79,000
White "B," 16 " " "	16,000
Green "B," 1 " " "	1,000
White "E," 1 " " "	1,000
White "F," 29 " " "	29,000

Total, 517 Bonds, \$1000 each.....\$517,000

Interest on the same funded.....	\$250,780 00
Total amount	767,780 00
Amount deducted (war interest).....	184,266 20
Net amount.....	\$583,513 80
Amount "Certificates" taken up.....	3,466 47
Total net amount six per cents funded	\$586,980 27

For which have been issued—

549 Settlement Bonds, bearing six per cent. interest, \$1000 each	\$549,000 00
331 Settlement Bonds, bearing six per cent. interest, \$100 each....	33,100 00
Certificates.....	4,880 27
Total net amount issued six per cent. Bonds.....	\$586,980 27

FIVE PER CENT. BONDS.

White "A" and White "AA" renewed, 258 Bonds, \$1000 each.....	\$258,000 00
White, no letter, 11 Bonds, \$1000 each.....	11,000 00

Total, 269 Bonds, \$1000 each.....	\$269,000 00
Interest on the same funded.....	\$127,834 47
Total amount.....	396,834 47
Amount deducted (war interest).....	79,367 66
Net amount	\$317,470 81
Amount "Certificates" taken up	444 17

Total net amount five per cents funded.....\$317,914 98

For which have been issued—

310 Bonds, bearing five per cent. interest, \$1000 each.....	\$310,000 00
71 Bonds, bearing five per cent. interest, \$100 each.....	7,100 00
Certificates.....	814 98

Total net amount issued five per cent. Bonds.....\$317,914 98

RAILROAD BONDS—THREE PER CENT.

White "B," 622 Bonds, \$1000 each.....	\$622,000 00
White "C," 86 " " ".....	86,000 00
Green "F," 438 " " ".....	438,000 00
Green "B," 62 " " ".....	62,000 00
Green, no letter, 172 " " ".....	172,000 00
White "D," 205 " " ".....	205,000 00
Compromise, 2,386 " " ".....	2,386,000 00
Compromise, 580 " \$500 ".....	290,000 00
White, no letter, 3 " \$1000 ".....	3,000 00

Total 4,535 Bonds.....\$4,244,000 00

Interest on the same funded.....\$ 832,307 50

Total amount.....5,076,307 50

Amount deducted the same having been funded under 60-6 Act).....1,627,638 83

Net amount.....3,448,668 67

Amount "Certificates" taken up.....6,421 97

Total net amount three per cent. funded.....\$3,455,090 64

[Many of these bonds were funded under the 60-6 Act of 1882, by which they were reduced forty cents on the dollar, leaving sixty cents on the dollar of original amount to be funded under Act of 1883.]

For which we have issued—

3,317 Bonds, bearing three per cent. interest, \$1000 each.....	\$3,317,000 00
983 Bonds, bearing three per cent. interest, \$100 each.....	98,300 00
Certificates.....	9,790 64

Total three per cent. Bonds issued.....\$3,455,090 64

From the above statement it will be seen that the Debt on "New Settlement Bonds" upon which the State is now paying interest—deducting difference between Certificates taken up and Certificates issued—is as follows:

Six per cent Bonds.....	\$ 582,100 00
Five per cent. Bonds.....	317,100 00
Three per cent. Bonds.....	3,445,300 00

From the above it will also be seen that there has been taken up in six per cent. Bonds and Certificates.....\$586,980 27

Add amount deducted (war interest).....195,660 09

Total.....\$782,640 36

There has been retired in five per cent. Bonds and Certificates.....	\$317,914 98
Add amount deducted for war interest	79,478 77
Total.....	\$397,393 75
There has been retired in three per cent. Bonds and Certificates.....	\$3,455,090 61
Add fifty per cent. deducted, one half of original bonds.....	3,455,090 64
Total Amount of Railroad Bonds retired by 50-3 Act.....	\$6,910,181 28
Add six per cent. Bonds retired.....	782,640 39
Add five per cent. Bonds retired.....	397,393 75
Which gives amount of original debt and interest retired.....	\$3,090,215 39

Another feature of the financial embarrassment of our State has grown out of the "Torbett Issue," or notes of the old State Bank, issued principally during the war, which we are constrained under decision of the Supreme Court of the United States to receive for taxes, and in doing so, under the direction of the last Legislature, have to take up in the shape of taxes \$200,000 annually.

There is pending in our State courts, and will probably be decided this winter, suits involving the State's liability for more than \$300,000.00 of this "Torbett Issue;" \$631,000.00 has already been examined and substituted by Treasury Certificates, and an unknown quantity not yet brought in.

I am encouraged, however, very much in the belief that these financial impediments which have so long been an embarrassment to the State, are being gradually and successfully removed. That the State is righting herself, after the severe storm through which she has partially passed, is evidenced by the fact that within the limited time that the funding has been going on we have retired more than *eight millions of dollars* of our bonded indebtedness, without any efforts or appliances whatever, other than the publication of the law itself, with the preamble thereto, giving a history of its creation, the circumstances of its growth, and the manner in which it has been handled. No like measure, as far as I am able to learn, in any State, has been more successful in its operations than our funding act of 1883, only where there has been a positive limit to the time in which the same should be funded, as in the act of 1832. Especially is this so when we consider that, as it is understood, more than one-third of our bonded indebtedness is involved in the suit, still pending in the Supreme Court of the United States, between certain bondholders and the railroads of our State, none of which, as is understood, has been presented to the Funding Board, or will be until the suit is decided.

It is also a gratifying fact that the proportion paid, and to be paid, on our entire indebtedness, under the operation of this act of 1833, a large amount of which grew up immediately after the war, when the governing laws as well as the business relations were in an unsettled condition, is equal and in most instances greater than that of any of our sister Southern States that have passed through the same trying ordeal. It is also quite as gratifying that our bonds, which, before the Funding Board commenced its operations under act of March, 1833, when saleable at all, were disposed of at most ruinous rates, and that now, notwithstanding the recent severe monetary pressure, are sought after by purchasers in the money markets of the world at a price advanced to almost double that for which they sold eighteen months ago—our six per cents. being sold now as high as ninety-seven cents on the dollar or nearly at par, and the three per cents. which then sold at from thirty-five and forty cents, now sell at from fifty-five to sixty cents on the dollar.

It is respectfully requested that you will appoint suitable committees to examine, critically, the work of the Funding Board, and see that it has been done in conformity with the statute, and especially that all of the bonds have been properly substituted by the new or "Settlement Bonds," and all the old bonds and coupons thereunto attached have been properly cancelled. It is also requested that a suitable committee be appointed to examine and count the old State Bank issue, both the old and Torbett issue, to ascertain and report to your body if all the money taken in by the board of examiners and passed upon by experts has been properly cancelled.

In this connection I desire to State that an act passed by the Thirty-seventh General Assembly, authorizing the Governor to make arrangements to guard the interests of the State in a suit then pending in the Federal Court at Nashville, wherein the United States Government had sued the McMinnville & Manchester Railroad Company for \$57,000. The State, having sold said McMinnville road, its rails, engines, etc., to the Memphis & Charleston Railroad Company, the purchasers required that the State should hold them harmless as to the result of said suit, and to do so there was subsequently deposited in the Fourth National Bank, 127 bonds of the State for \$1,000 each as collateral. The said suit was not terminated until within the last few months, resulting in a judgment against said McMinnville & Manchester Railroad Company, including cost of \$10,336.00. The decree of the

court directed the sale of said bonds for the said judgment and cost. To prevent said sale with accumulated cost and issuance of execution, upon consultation with the Attorney-General of the State, Treasurer and Comptroller, it was thought best for the State that the Treasurer should pay the judgment and take up the 127 bonds. This was done, and said bonds are in the hands of the Treasurer, awaiting your action. It is hoped our course meets with your approval. I suggest the said 127 bonds for \$1,000 each be cancelled and filed away as other cancelled bonds are.

RESOURCES OF THE STATE.

In the general recapitulation of taxable property in Tennessee the Comptroller's report shows the total value of taxable property in the State for 1883, not including railroad property, amounted to \$222,687,873.00—a total net increase for the year of \$708,060.00.

For 1884 the total value of taxable property in the State, not including railroad property, amounted to \$226,844,184.00—a total net increase over the previous year of \$4,206,311.00. This is largely attributable not only to the increased value of property, but also to the superior vigilance in assessing, which is to be commended. It, however, also indicates that Tennessee is on rising ground. The period of the highest valuation of property in the State was reached in 1873, when it amounted to \$308,089,738.00. This was the year in which the great financial panic came. Property, everywhere, immediately began to dwindle, business in all branches was prostrated, and this down-grade journey continued without abatement until 1880, when the total taxable property of the State had dropped to only \$211,768,438.00—a loss to the State in taxable values, as assessed between those periods, of \$96,321,300.00, or nearly one-third. A slight advance in property values was made in 1881, but this was only temporary, for in 1882 the amount again lessened in assessed value. The two years just past, however, show another and seemingly healthier reaction. Values have improved and are again advancing. The total valuation for the year 1884 exceeds that of any other year since 1877. Not only does property, in general, indicate enhanced values, but a vast deal of capital is coming into the State seeking investment. New mines are being opened, new manufactories are being erected, and much attention is being directed to hitherto unoccupied and neglected localities. Tennessee once more is on the line of progress. Brighter, happier, more prosperous days

are dawning on our State. And now, if freed from political turmoil and excitement for the next four years, if distracting sectional questions in national politics be relegated to the rear; with measures of the wisest economy alone engaging the attention of the people, the State of Tennessee cannot fail to go forward on the road that leads to increased wealth, prosperity and contentment. Happily situated in the very heart of the most promising section—stretching her full length along the border of our Southland, the eye of industry has turned in this direction, and the natural and unavoidable highways of commerce must, to a great extent, traverse her territory. Thus, her geographical placement, her immeasurable resources and her favorable climatic considerations, if directed by prudent, yet liberal and enlightened, policy, will combine in attracting thrifty and industrious immigrants to a participation in her enrichment as well as continue the elevation of her own citizenship.

RAILROAD PROPERTY.

Compiled from the returns of the railroad assessors, the Comptroller presents a tabular statement showing the length of the several railroads in Tennessee; also the assessed value per mile; the aggregate assessed valuation of each road, and the aggregate value of all the railroads in the State. This statement shows that on September 19, 1883, the total miles of railroad in the State were 2,932, of an aggregate assessed value of \$31,547,299.23. Their average value per mile was \$15,521.42; increase of mileage over last report of nine and a fraction miles; increase of value over last report \$4,531,199.11.

On July 17, 1884, the assessors returned the total number of miles of railroad in the State at 2,094, of an aggregate assessed value of \$34,350,170.84. Their average value per mile for this year was \$16,400.17; increase of mileage, over assessment of 1883, sixty-two miles; increase of value, over assessment of 1883, \$2,802,871.61; increase of mileage over last Comptroller's report, seventy-one miles; increase of value over last Comptroller's report (made in 1882) \$7,334,070.72.

Now, if to the total value of taxable property in the State in 1884 (\$226,844,184.00), we add the aggregate assessed value of railroad property in the State in 1884 (\$34,350,170.84), it brings up the total valuation of property in the State to \$261,194,354.84, which largely exceeds any other year since 1876, thus showing that our State,

after her long travail from social, political and financial trouble, is passing from under the clouds of depression into the sunlight. The general tendency of this increase, I am happy to conclude, will in time act as a relief to the burden of taxation.

RAILROAD COMMISSION.

The problem of railway transportation is everywhere receiving marked public attention. As a commercial factor, the railroad is a modern growth, and through its far-reaching development, has wrought a revolution in business methods. In all countries where it has been established, and where it has become an essential element in the carrying trade, its operations are the subject of formal legislative action and judicial review. The questions involved in the creation and practical workings of this system do not arise from the railroad merely as a common carrier, but from its combination with a piece of legal machinery known as the corporation. And the concurrent wisdom of legislatures and courts, both State and Federal, after mature and exhaustive consideration of the principle underlying the incorporation of railroads, has formulated the authoritative judgment that corporations, owning and operating the highways of commerce, are legally and constitutionally amenable to the law-making power. No one disputes the inestimable value of railroads under a just administration of their affairs, and while content to act as the servants of the people; but they are built under charters conferred by the Government, and should be subordinated to its authority and the welfare of the people.

In Great Britain, where the railway system had its origin, and where it has reached vast proportions, the Parliament has in successful and unchallenged operation a Board of Railroad Commissioners, through whose efforts the people are afforded an equitable interchange of traffic over the railroad lines and practical relief from the unjust discriminations that had previously existed.

Lord Chief Justice Hale, in an exposition of the common rights of property, held, that "where private property is affected with a public interest, it ceases to be *juris privati* only." Chief Justice Waite says: "When one devotes his property to a use in which the public has an interest, he, in effect, grants the public an interest in that use and must submit to be controlled by the public." Theophilus Parsons, a recognized legal authority throughout the United States, says: "They

(the railroads) are the creatures of the State and to the State alone must belong the power of determining what shall be paid to them by those who make use of the facilities they offer."

Judge John Baxter, in the cases of the Louisville & Nashville and East Tennessee, Virginia & Georgia Railroad Companies, says: "Railroads have been created mainly for the accommodation of the public and to facilitate the business of the country * * * * * If unrestrained by wholesome legislation, the public would be very much at their mercy. They could, by unjust discriminations, made under the name of drawbacks, rebates, or disingenuous pretences, favor friends and oppress opponents, and so adjust and graduate their rates according to the exigences of fluctuating markets, as to secure to themselves or those who operate them, an undue proportion of advancing prices. It would, therefore, in view of these obvious possibilities, be a humiliating confession that there was no reserved power in the Court or the Legislature to protect the public against such possible abuses. We do not hesitate to affirm the existence of such a power."

The right of railway control by the Legislature being conceded by such eminent English and American authority, the question of supreme moment with the people of Tennessee, is the expediency of exercising that right in the form and manner of a Board of Railroad Commissioners, properly constituted, through legislative enactment, and operating within just and constitutional limits, as to the execution of this trust. As evidence that such commission is not deemed offensive or detrimental to railroad interests by those best fitted to speak, allow me to reproduce the statement of Hon. Albert Fink, acknowledged the greatest railroad traffic manager in the country, made before the United States Senate Committee on labor and statistics, in September, 1883. Asking his judgment as to the wisdom of railroad supervision by State Boards of Commissioners, he said: "As a rule the commissioners are only advisory, and I think that it is a most excellent feature, and a very good thing to have these commissions, because you can explain to commissions a good many things that you cannot explain to the people at large. It is desirable that the people should have some tribunal to which they could go and make their complaints and get them investigated. They make their complaints to these commissioners, and the commissioners confer with the railroad companies. That is a very excellent plan, and if the commissioners are the proper kind of men, they will do a great deal of good." Certainly, as shown by Mr. Fink,

commissioners, simplify the machinery of adjustments, and hence expedite and economize settlements between shippers and railroad companies, and yet do not affect the right of appeal to higher tribunals by either party who may feel aggrieved by any action of the commissioners. The fact that the national platforms of the great political parties emphasised the principle of railroad supervision by Governmental authority; that President Arthur and President-elect Cleveland are on record in official capacity in its favor; that 24 States, conspicuously New York, Ohio, Massachusetts, Illinois, Missouri and Georgia, and every State contiguous to Tennessee (but one), have in successful operation efficient Commissions; that the Reagan bill and its substitute now before Congress, both recognizing the constitutionality and practical expediency of railroad regulation; that according to Poor's Railroad Manual, 3,271 miles of railroad were built in 1882 in seven named States with Commissions, and 1,694 miles built in seven States without Commissions; these are significant facts, and unmistakably voice a volume of evidence showing that railroad regulation is not violative of constitutional or charter rights; that such institutions, with which the rights of the public are intimately blended, *cannot be placed altogether beyond the reach of the public*; and that the commercial and material interests of the country are conserved and not imperilled by legislative control of railways when constitutionally and justly exercised. The interests of the people of this State are not different, but identical with those of many of the States where legislation recognizes and enforces the constitutional right of railroad regulation; and hence the legislation they have enacted has been considered no unsafe guide in shaping the legislative railway policy of Tennessee, and although (it being the first of the kind in our State) it may be subject to judicial pruning, it is a step in the right direction.

Thus it was that in obedience to the well-known will of the people of the State, as formally expressed through regularly constituted political conventions, and through popular elections held to choose Senators and Representatives to the General Assembly, the Legislature met in 1883, contemplating no unfriendly or unjust legislation towards railroads operating in Tennessee, and only claiming a constitutional right to enact a judicious system of railway control, and to create a board of competent Railroad Commissioners, who would sit in just and intelligent judgment on all alleged grievances that might arise between the people and the railroads as common carriers, and to frame, in

conference with the railway companies, a uniform and equitable tariff of freight rates; and did, on the 29th of March, 1883, pass a bill providing for the regulation of railroads, which received the approval of the Executive, and in pursuance of the requirements, three Commissioners—John H. Savage, of Warren county, J. A. Turley, of McMinn county, and George W. Gordon, of Shelby county—were appointed and duly qualified. On entering on the discharge of their duties, the authorities of certain railroads, conceiving that their rights and interests were aggrieved through the provisions of the bill, caused legal proceedings to be instituted in the Federal Court, whereby to to restrain the Commissioners from further alleged interference with them, until judgment of the court, on the same, should be given. Thus, that which is deemed an indefeasible right to control, within the limits of constitutional and just legislation, the railroads of the State, was put in peril by those whose very existence was originally made possible only through the creative will of those whose supervising authority over them is now challenged and denied.

The railroads have been and are valuable allies in developing the resources of Tennessee, and the people rightly esteem them fitted to become still more helpful factors in her future progress. Any breach of good faith and good will, between them and the people, is to be deprecated. While the railroads have done, and are doing, much for the State, the people of the State, in return, have likewise done and are doing much for them. According to Poor's Railroad Manual, the people of Tennessee paid the railroads in 1883, \$9,517,406.00 for freight and passengers; of this sum \$3,000,000.00 going as dividends to stockholders, mostly non-residents, which on the basis of assessed value of this species of property that year (\$31,197,200.00) is about ten per cent. profit. Moreover, the people are paying \$150,000.00—and when the bonds are all funded will pay nearly \$400,000.00—annual interest on bonds issued for the benefit of the roads, and will have to pay at some future time the principal, amounting to some \$13,000,000.

The Hon. John Baxter, in the decision rendered in these cases, recited wherein the Commission Bill is defective. Having been appealed, the matter in contest must await final action by the Federal Supreme Court. As the result of judicial proceedings the Commissioners have necessarily been restrained in their work, and their official influence and usefulness correspondingly impaired. It is therefore suggested that the Commission Bill of 1883 be not repealed, but

purged of its defects, if such there be, and that the system it instituted be recognized upon a constitutional basis, equitable in its provisions and fitted to promote the joint interests of the people and the railroads.

If the railroad companies in operating their roads are guilty of extortion and unjust discrimination in their charges for transportation, it ought to be corrected. If they are not guilty of it there will be nothing to correct. The people are entitled to nothing less, and the railroads can require nothing more. If, in your wisdom, this cannot be successfully done, then it is suggested that the existing enactment of 1883 remain in such shape as not to deprive the parties interested of the benefit of the opinion of the Federal Appellate Court. As to the questions involved, such enunciation from the highest judicial tribunal might guide future legislation on this vexed question. Commerce within the State, and not inter-State commerce, is regarded as the legitimate range of the Commissioners, and within that sphere, may it not be hoped that such methods may be devised and put in practical and efficient operation as will, in the language of my inaugural address to the last General Assembly, do justice to both the people and the railroads. I then said to the Forty-third General Assembly, and here repeat it with emphasis, that—

“While corporations (railroads) should have all just rights maintained, and proper encouragement to make their work useful and profitable, ye, as they grow mighty in their strength and strain for unjust power, as they are prone to do, they should be checked by lines of legal limit, and told in unmistakable terms, ‘Thus far shalt thou go and no farther’ The spirit of resentment or intolerance, however, should not stir the storm of passion, nor ride on the wave of prejudice, but give way to that calmer reason which respects the rights of all.”

I desire to call your attention to the reports of said Commissioners for the history of its operations. They are herewith transmitted.

PENITENTIARY.

According to provisions of Act of the General Assembly, passed March 28, 1883, providing for the lease and management of the State Penitentiary, and in due observance of the requirements of said act, the Secretary of State under the instructions of the Governor, advertised for sixty days' in three newspapers, one published in each division of the State, and in one newspaper in each of the cities of New York, Louisville and New Orleans; that said peni-

tentiary and property thereto belonging would on the 6th day of July, 1883, at 12 o'clock of said day, at the capitol of Tennessee, be leased to the highest bidder for the term of six years, from the 1st of January, 1884. At the above named day and place, the Governor and Inspectors offered said property to lease at public outcry, and required bidders for the same to file with them satisfactory evidence that in case the property and labor should be struck off to them as bidders, that he or they would fully comply with and execute the bond required by said act; and as an additional security, likewise provided, such bidder was required and did deposit with me as Governor a certified check for \$10,000, payable to my order on a solvent bank in this State, to be forfeited to the State in the event said bid was not complied with. Agreeably therewith said property and labor were leased for a term of six years, from the 1st of January, 1884, to the Tennessee Coal, Iron and Railroad Company as lessees, for the sum of \$101,000 per annum, payable quarterly into the State Treasury; said lessees filed with the Governor and Inspectors, an approved bond covering the sum of \$101,000, and conditioned for a strict performance of all the requirements of said act in regard to lease of said property and labor. The lessees have promptly and fully complied with the terms and conditions of said lease, and by reference to the official reports of the Superintendent, Warden and Surgeon it will be seen that the interests of the State in said property and labor have been carefully subserved.

NUMBER OF PRISONERS AND THEIR DISTRIBUTION.

There were 1,324 on the prison rolls Dec. 1, 1884, and distributed as follows: Main Prison, 530; Tracy City, 487; Coal Creek, 159; Inman, 128; Spence's farm, 22.

By reason of insufficient accommodations at the main prison it was a wise provision to limit the number of convicts to be confined there to 550. The buildings are covered by ample insurance in solvent companies, and all in reasonably good condition considering their age and necessary usage. A fire occurred on Saturday night, January 12, 1884, in a building used jointly as a blacksmith and paint shop, which was damaged to the amount of \$3,300, fully protected by insurance, and in ten days was rebuilt and in use.

A comfortable and well-constructed cell-building has been erected in addition for females, and also a laundry. In conjunction with

the Prison Inspectors and Superintendent, steps have been taken to remedy defective ventilation of cells and corridors, and now these apartments have full supply of fresh air, which, according to the Surgeons' report, has contributed to add much to the general health of the inmates. Commodious buildings have been erected at all the prison branches.

CONDITION OF PRISONERS.

Dr. Roberts, Surgeon in charge of main prison, reports improvement in general health of prisoners. I am glad to state the rate of mortality has steadily decreased. The prisoners are well provided in clothing, food and medical attendance, and not overworked, but worked according to the requirements of law. The water supply has been greatly increased, to meet any daily demand or any extraordinary demand in the event of fire.

DISCIPLINE.

The harsh, punitive methods originally in use have been abolished, and the punishment now inflicted upon the refractory is directed to their obedience and reformation and the less hardened, as far as possible, are kept from association with the more vicious. Tennessee was the pioneer in instituting the "Good Time Act," and other States having adopted it, have enlarged its beneficiary provisions.

THE LEASE.

The Tennessee Coal, Iron and Railroad Company, the lessees, headquarters at Tracy City, control sixty per cent. of the entire prison force, and work them at the four branch prisons, and sub-lease the remainder to Cherry, Morrow & Co., for work in the main prison. From official records the following facts appear: From the date when the Penitentiary went into operation, January 1, 1831, to July 16, 1866, during which time the State itself conducted the institution, the expense attending the same was as follows: Amount of appropriation to support Penitentiary from January 1, 1831, to close of 1865, \$136,407.67. Not including the period of civil war, the estimated annual cost of conveying convicts at \$8,000, \$240,000. Total expense, \$376,407.67.

From 1866 to 1871, in which time the semi-lease or hiring contract system existed, the following was its expense to the State:

Appropriations.....	\$451,350 38
Estimated average annual expense of conveying convicts at \$12,000, and like sum for salaries five years.....	120,000 00
Total.....	\$571,350 38
Aggregate cost to the State from Jan. 1, 1831, to end of 1865..	\$376,407 67
From 1866 to 1871.....	571,350 38
Total.....	\$947,758 05

This is the amount which the support of the Penitentiary has cost the State from the commencement of its operation in 1831 to 1871, when it was leased to O'Connor & Looney. Under that lease, and the succeeding ones, including the present one to the Tennessee Coal, Iron and Railroad Company, the Penitentiary, instead of being a burden on the Treasury as heretofore, has been a source of large revenue to the State. The books of the Comptroller show that from 1872 to 1884 the total amount received by the State to be \$591,617.02. The buildings and machinery that were destroyed by fire in 1882, not being insured, cost, with other repairs for that year, \$78,874.49, which was an expense on the Treasury. Under the present lease, which commenced January 1, 1884, and to continue six years, the State will derive an annual income therefrom of \$101,000, and for the term of six years, \$606,000. Thus it appears from official records in the Capitol that for five years previous to the commencement of the regular lease system—that is from 1866 to 1871—the annual expense of Penitentiary to the State was \$114,270.07, while under the operations of the present lease the annual profit will be \$101,000, making a saving each year of \$215,270.07; and for the six years' term of lease, a saving of \$1,291,620.42.

This simple statement, based on authentic facts, clearly shows that as a matter of business and financial consideration, the lease system is incomparably more economical in being no burden upon the Treasury, but on the other hand a source of substantial profit to the State. In this connection it may be proper to weigh the objection often preferred against the lease system that as a politico-economic policy it degrades and pauperizes honest labor through competition with cheap convict labor. As a question of conceded public importance, this matter was the subject of patient and thorough deliberation by the General Assembly of 1883 as in former years, and by me as Governor, officially entrusted with a supervising guardianship of the interests of the people of the State, and it was

the concurrent judgment of both the Legislature and the Executive that the lease system considered in all its bearings is the most economical and least objectionable mode of handling prison labor, while it has many objectionable features. Especially is this apparent under the practical workings of the system as now in operation at the prison branches and in the main prison. From official facts especially obtained to throw light on this vexed question, the following should allay any feverish apprehension that the lease system as now operated, is as alleged, injurious to honest free labor. Of the 1,324 enrolled prisoners, 772 are in charge of the Tennessee Coal, Iron and Railroad Company, distributed and at work in the mines at Tracy City, Coal Creek and Inman prisons, and kept separate and apart from hundreds of honest laborers, who secure equal pay with the same labor employed in other similar mining operations in the State; and I am informed no honest free laborer, applying for work, has been denied employment by reason of the presence of convict labor. The demand for honest labor at the mines of the lessees is a standing invitation to all laborers to come and get good wages, and where they can work apart from convict labor. Moreover, this convict labor is hid away in the bowels of the earth, far distant from the thoroughfares of mechanic industry, and hence much less competitive with honest mechanical labor than would be the case if the lease system did not exist and the State was forced to work convict labor in manufacturing within the prison walls and sell the product of their labor on open market. As now employed the mining convicts are developing the material resources of the State and furnishing cheap fuel for domestic consumption and manufacturing purposes.

As to those convicts sub-leased to Cherry, Morrow & Co., twenty-two are employed on Spence's farm in raising vegetables to supply the main prison, and of the remainder about twenty are working in the foundry, and only twenty-five in the furniture factory, leaving about 485 employed in the manufacture of wagons. Now let us inquire to what extent convict labor as worked in the main prison is in competition with honest mechanical labor in the State. It is ascertained by reference to the books of the Penitentiary that the bulk of the furniture manufactured is shipped out of the State and hence becomes a source of revenue to the State. The average yearly manufacture of wagons at the main prison is about 15,000, of which about 1,200 are sold through a Nashville agent in Tennessee and Kentucky, which, equally divided, would be about 600 convict-made wagons sold annually in Tennessee, in value amounting to \$22,500,

whereas, near 14,000 are sold throughout the States from New York to Texas, thus becoming a yearly means of bringing into the State the large sum of \$600,000, the bulk of which goes into the pockets of the people for lumber and wages. Thus the lease system practically becomes a constant and efficient source of substantial revenue to hundreds of laboring men in the lumber districts throughout the State, besides otherwise benefitting general trade in the circulation and investment of accrued earnings.

THE YOUTHS AS CONVICTS.

Of those 16 years old and under, there are 5 white males, 31 colored males and 6 colored females now in prison. It has been my uniform course in cases recommended by the prison officials or otherwise reliably brought to my attention to exercise executive clemency and pardon convicts of tender years when the safety of society would permit. A large number have thus been pardoned but there will necessarily be a good number always on the prison rolls, and hence the subject becomes one that properly addresses itself to the wisdom of the General Assembly for legislative action.

Many States and municipal corporations have established reformatory institutions for the youthful criminal classes and large beneficial results have followed such measures. Such establishments in their proper equipment and maintenance necessarily require no small appropriation of public funds. Considering the comparatively few young criminals in the State prison, I would suggest that a select committee be created by the General Assembly to mature some plan and report the same at as early a day as practicable, by which all criminals of tender years in the State prison may be properly cared for and worked separately and apart from those older and more hardened; and that primary instruction be given them, as well as some suitable trade be assigned them in their work. My information from prison officials is, that of the forty-two of that class at present in the prison, none had any trade, and only four can read. With but small cost to the State, some provisional arrangement may be instituted within the prison walls to secure the object herein indicated. To this end I respectfully and earnestly invoke the attention of the General Assembly. I would also suggest that the said Committee just referred to, report any other changes regarded as necessary in the management of the main prison and its branches.

Regularly on each Sabbath religious services are held in the prison by the Chaplain, Rev. Dr. C. D. Elliott. In addition an after-

noon Sunday school is in operation under the Superintendency of Mr. J. O. Griffith, assisted by many devout, worthy persons, male and female, of Nashville, with an average attendance of over 400 inmates of the prison. Those of them who can read are generally supplied each sabbath with religious reading matter. It has been suggested that every convict be furnished with a Bible or Testament, as there is a great need of such in the prison, which is cheerfully recommended. It is suggested that the Board of Prison Inspectors be required every six months or oftener to visit the branch prisons, and make report to the Executive as to the condition, health, diet, clothing and all matters relating to the welfare of the prisoners, the necessary expense of the Board on these visits of inspection to be provided for by legislation.

BUREAU OF AGRICULTURE, STATISTICS, MINES AND IMMIGRATION.

The department of the public service embracing Agriculture, Statistics, Mines and Immigration has in its keeping many of the most valuable material interests of the State. In no more important channel can an enlightened State policy direct its attention than in giving the resources of the Commonwealth the benefit of the wisest and most friendly legislation. Domestic and foreign capital and skilled labor are constantly in search of remunerative investment, and no State in the Union can offer inducements superior to those found in Tennessee. It is, therefore, the clearly defined duty of the State so to shape legislation that the vast undeveloped resources and productive capabilities in which Tennessee abounds be not hid under a bushel, but be uncovered, that the public eye may form a just and intelligent appreciation of the great inducements offered to capital and labor.

As far as the public funds appropriated to meet expenditures in this department would warrant, Commissioner A. J. McWhirter has most efficiently and faithfully discharged his duties, and the results of his work attest the wisdom of the appropriation, and justify an allowance to meet the diversified demands which this important service, in its developed usefulness, must be expected to make upon the State Treasury. Within the restricted limits of a message it is impossible to give a detailed statement, but only an epitome of the work in this department, and refer for full information to the Biennial Report of the Commissioner. Up to and including Decem-

ber 2d, 1884, \$15,323.88 was the sum expended, embracing Geological Department, Louisville and Boston Expositions, Agriculture, Immigration, and the expenses necessary to Statistics, Weather Service, Seed, Printing, Stationery, Postage, Mailing, Clerk hire, and the other items incident to the same. Seeds of value and in considerable quantities, contributed by the United States Commissioner of Agriculture, and by some public-spirited citizens of Tennessee, as well as those purchased by the State Commissioner, have been gratuitously distributed to the crop reporters of the Bureau and to other persons of the State engaged in agriculture. The statistics of growing crops, of manufactures, and of the commerce of the State, are complete, so far as the present facilities of the Bureau will allow, and legislation is needed to place some means in the hands of the Commissioner to enable him to command this important information.

Signal Service facilities need enlargement in the State, as the present system is wholly inadequate to accomplish the valuable results contemplated.

On account of a growing spirit of manufacturing interest in Tennessee, I would suggest the importance of enlarging the items embraced under the title "Crop Statistics," so as to include the collection of statistics of manufacturing interests in the State.

Tennessee agriculture was never more promising than at present. The farmers of the State are endeavoring to keep abreast with the times. They are adopting new methods and improved machinery generally throughout the State.

The duties of the Bureau in correspondence, crop reports, weather service, etc., which demand daily attention, are much greater than heretofore, and will continue to increase as the value of the service is appreciated by the people.

The Commissioner reports that as an outcome of the Expositions held at Louisville and Boston more than one million of dollars, besides one thousand families, have been attracted to the State. The immigrants have been chiefly skilled mechanics. The Exposition at New Orleans is an opportune occasion to publish to the world the unrivaled mines, resources and agricultural productiveness of the State. The Commissioner, with commendable energy and a comparatively small amount of money, has arranged in part the Tennessee exhibit, but an additional appropriation is needed to complete the work and make it creditable to the State. As to what this

amount should be, I can only cite you to the report of the Commissioner and the action of other States. Every Tennessean should, and does, feel a pride in the presentation our State shall make at the Exposition, where a just and generous rivalry obtains among nations and States in the display of Nature's kindly gifts, as in mechanical, artistic and educational advancement.

GEOLOGY.

Special attention is called to the report of Prof. J. M. Safford, State Geologist, on the agricultural and economic geology of Tennessee, and other matters of interest therein related. The public need of reliable and practical information relative to the soils of our State, and the formation underlying them, their adaptation to crops, and the increased interest in our vast but incompletely developed resources, would suggest the wisdom of thoroughly organizing this department, and equipping it for more extended usefulness. I quote from Prof. Safford's report when I say: "There is much work yet to be done in the elucidation of the agricultural and economic geology of the State, which a moderate appropriation of means would enable the geologist to carry on and perfect."
 * * * * The more we know of our lands and minerals, the better can we use them and the better advertise them." The officer in charge should be Geologist and Mining Engineer combined, whose duty, in addition to the unremunerated kind of labor which Prof. Safford has been giving to the State, shall be, every six months, and oftener if deemed necessary by the Governor, to visit and inspect the mines throughout the State, where free labor or convict labor of the State is employed, and report their condition, as regards ventilation and proper regard for the health and lives of the laborers, to the Executive of the State. Adequate appropriation should be made to meet the necessary expenses of the work. I deem it appropriate to say here that Prof. Safford received only a hundred dollars during the biennial term, which was absorbed in necessary expenses while engaged in the work, as will be seen by his report. Nothing that has been done contributed more effectively to bringing into notice the resources of our State than Prof. Safford's work on the Geology of Tennessee, a work for which there is demand at home and abroad, that cannot be supplied, as the work is out of print. A moderate sum will be needed, and if appropriated, as it should be, will no doubt result in much good to the agricultural and mining interests of the State.

LAND TITLES.

It is believed, and not without good reason, that there are but few, if any, large bodies of lands in Tennessee, which, in the legal sense of the term, are "vacant lands," yet grants are constantly applied for and obtained, especially where mineral ore abounds, covering large tracts of territory, even in some of our older and more populous counties, where it is believed there is not an acre of ungranted land.

It has been my duty to sign grants for land for which, no doubt, several other grants had been issued. The surveyor's and entry-taker's certificates being in due form, the Governor is powerless to remedy the evil complained of. It has been brought to my knowledge that many grants have been obtained for the same land. In one instance it was shown in a suit that thirteen grants were issued covering the same tract of land. To find the same land covered with half a dozen or more grants is not infrequent. I have, as Governor, received letters from the victims of these frauds, complaining that the grants had been issued in due form by the State, and were genuine; and by virtue thereof, they had been induced to purchase, yet got no title. Such instances are not isolated, but numerous. This breeds irritating and expensive litigation at home, while it creates distrust abroad, and operates as an impediment to immigration, investment and development.

I call this to your attention, and invoke legislation that will prevent such frauds being practiced under the name of the State.

JUDICIARY.

In my first message to the Forty-third General Assembly, I called their attention to the overcrowded condition of the Supreme Court docket and to the 17th section of the bill of rights, which declares "that all courts shall be open, and every man for an injury done him in his lands, goods, person, or reputation, shall have remedy by due course of law, and right and justice administered without sale, denial or delay."

In accordance with the recommendations of that message, the act approved March 30, 1883, Chapter 257, was passed, authorizing the appointment, in each grand division of the State, of three persons, one from each grand division, learned in the law, who should compose a commission of referees, to whom the Supreme Court might, by rule made in vacation or term time, refer such civil

causes (except revenue causes) as were then pending in said Court at any time prior to the 1st day of January, 1885, at Jackson, Knoxville and Nashville for investigation, and report upon the law and facts, such reports to be in writing and be signed by at least two of said referees. The further provisions of the act are familiar to many of your honorable body.

By the 6th section of the act, the term of office of the referees shall not continue longer than two years from the date of their appointment, and shall terminate sooner if the business referred to them shall be sooner finished.

Referees were accordingly appointed on or about the 15th of May, 1883, and they at once entered upon their duties, and have in each grand division been equally active, vigilant and faithful in their discharge.

My information is that at Knoxville and Jackson, the referees have by their efficient labors so nearly finished the business referred to them that they can quite complete it by the expiration of the two years from the date of their appointment, but at Nashville, owing to greater amount of business, the referees have not been able to finish it. Up to December 1, 1884, the referees at Nashville tried and reported on 915 causes, bringing the docket down to January 1, 1882. To 486 of these causes so reported on, no such exceptions were filed, and the reports were confirmed by the Supreme Court from the bench without argument. There remained on the Supreme Court docket at Nashville, December 1, 1884, 876 causes filed since January 1, 1882, not reported on by the referees, and there have been filed since January 1, 1884, a little over 300 causes, thus still leaving on the docket about 1,176 causes not reported on by the referees on December 1, 1884, notwithstanding their incessant labors. When you consider these facts, you will see at once the vast amount of business that the referees have dispatched, and how they have relieved the Supreme Court docket. But you will see at the same time that some provision should be made for the aid of the Supreme Court in disposing of the business yet crowding it at Nashville. I therefore recommend that you provide, by proper legislation, for the continuance of the term of office of the referees holding their sessions at Nashville, for such length of time as is necessary to accomplish the unfinished work, or by such other legislation as in your wisdom may seem most judicious, to provide for the relief of the Nashville docket, otherwise it will take years before suitors can have their rights determined, notwithstanding the arduous

labors of the Supreme Court. I repeat the language of my first message, to the Forty-third General Assembly in regard to the Supreme Court: "It is not the fault of the court that the docket is crowded. It is conceded that the court does all in their power to dispatch the business."

There is complaint from various quarters, of the great cost incurred in the prosecution of criminals. I would recommend that you provide by appropriate legislation, that the Clerks of the various courts in the State that try criminals shall keep a true and correct record of the disposition of every indictment in their courts whether dismissed or tried, and whether convicted or acquitted, and the verdict and judgment, and that the several Clerks make correct and faithful report thereof to the Attorney-General of the State on or before the 19th day of December, immediately preceding each regular session of the Legislature, and that the Attorney-General report the same to the Governor, who shall transmit it to the Legislature. This will bring before the public the exact facts as to the working of each court, and the economy or extravagance of each court can be seen and known to the law-making power and tax-paying public. This is now in force in several States, and has effected material change in lessening the cost in criminal cases. I further suggest that the cost of our courts might likewise be considerably lessened by changing the districts and lessening the number of Chancellors, Circuit and Criminal Judges in the State. The legal business in some of them is of such a nature as to enable many of the courts to get through their Term business in half the time it required ten years ago. This change, however, should you conclude to make it, ought not to go into effect just now, but should take effect time enough before the judicial election in 1886 to have the present districts changed into the new ones.

REWARDS OR CRIMINALS.

The amount appropriated by the last General Assembly for this purpose was only \$2,000 for the two years, there being only \$1,599.87 left over from the previous administration of the fund so appropriated, making a total of \$3,597.87 for the two years. This is greatly inadequate to meet the obligations of the State for rewards offered for fugitives from justice, and the expenses of agents of the State to bring them back under requisitions, where no rewards were offered. The rewards

offered by my predecessor amounted to \$49,950 (including \$10,000 by special legislative act offered for arrest of Ex-Treasurer Polk); rewards offered by myself amount to \$8,659. The Comptroller's report shows in detail all rewards paid. When captures occurred, in remunerating the service, I have had to divide out the funds appropriated to the best advantage among the applicants who were entitled to the same leaving considerable amount unpaid for want of appropriation. Notably among these is the case of the arrest of Andy Taylor for the murder of Sheriff Case, of Hamilton county, the unpaid balance on which now due the parties, is about \$1,000. An accurate statement of these obligations will be subsequently submitted to your body.

BACK TAXES.

The law in relation to the collection of "back taxes" has, in many instances, operated oppressively on some of our citizens. The length of time, the change in ownership of property, the loss of receipts and failure to enter payments on the books by collectors, have caused taxes on some property to be paid more than once for the same time. It is suggested that there ought to be some legislative relief in this regard, and I trust, without assuming to indicate how, that you will be able to give the relief that is needed.

REGISTRATION - OF VOTERS.

The sentiment which has been growing in our State from the experience in each recurring election, and which now seems to almost universally pervade all political parties, is that there should be some more effective laws to prevent illegal voting, especially in our large cities. The elective franchise is not only a political right, but one, the existence of which should be subject to such legal guards as to insure full effect in preventing the legal ballots from being neutralized by illegal ones. The virtue, sanctity and strength of the ballot-privilege is weakened whenever illegality is practiced in its exercise. That such is no infrequent occurrence is evidenced by the returns of many of our elections. Good government can alone be secured through virtuous and wholesome laws, and under our institutions, where the ballot is the basis of government, it should have sufficient legal protection to insure its exercise fairly and justly. It is almost impossible, under existing laws, as they are now enforced, to avoid the abuse of this right. Most States, to insure a free, just and fair ballot at elections, require all

voters to be registered within a certain time as a condition precedent to exercising the ballot privilege. This obtains in most States, and as I understand its history, in every State where it has been tested it meets with popular favor because of its efficiency. I suggest, therefore, that you enact such laws as will, without abridging it, throw more efficient guards around the exercise of this right in our cities.

ELECTION RETURNS.

In connection with what I have said, touching the elective franchise, it is proper that I should call your attention to the fact that there is a want of promptness and uniformity in the mode of making returns of State elections. Scarcely any two counties in the State observe the same form in making out election returns, or same mode of forwarding them. Every county officer has his own mode of making out the election returns. Some have the votes cast for every candidate on one sheet of paper, and others a separate sheet to every candidate; and also, it is frequently the case, that the returns of the votes for one political party are on one sheet and those of the opposing party on another.

Great delays in forwarding election returns open channels to fraud, and should be strictly forbidden. Notably, in our late National and State elections, some county officers sent forward the returns with promptness required by law, while others were so derelict as not to forward them for more than three weeks subsequent to the election, notwithstanding there are daily mails from the county site to the Capitol by rail. While there are severe penalties—as may be seen by reference to Section 1147 of (new) Code—Milliken & Vertrees—yet, although many returning officers have been and are amenable to it, in no instance that I am aware of, have they been enforced. It seems the Act fails to make it the special duty of any one to prosecute, nor does it lodge the duty in the Attorney-General of the State or district to enforce it. Neither is it made the duty of the Grand Jury to inquire into it. Hence, the law has so far been a dead letter, and returning officers violate it with impunity.

I suggest that additional legislation is needed to make more effective the existing laws, and to remove the opportunity for tampering with election returns. If made the special duty of the Secretary of State to inform the Attorney-General of the district of any illegal delay in making returns, and then the duty of the Attorney-

General to prosecute, *ex-officio*, the delinquent officer, it might correct the evil.

As to uniformity in election returns, I suggest that in all National and State elections the Secretary of State should be required to furnish forms alike to the returning officer of each county from which returns could be made intelligibly and with uniformity. I also suggest that the several sections of the (new) M. & V. Code, Chapter 2 (of Elections), Article IX., be so remedied by additional enactment as to reconcile and make them consistent, so that returning officers can clearly understand their duties in forwarding election returns. It will be seen by the Code, as it now is, that one section requires that certain returns be forwarded to the Secretary of State, others to the Governor, and others, to both. I suggest that the sections relating to this be recast by enactment that will clearly define the duty of officers in this regard.

Pertinent to the above, permit me to say that the Act of 1883, creating the Railroad Commission, does not show to whom the returns of their election shall be made, nor whether the same shall be canvassed by the Governor, Secretary of State, or both, and does not show by whom the certificates of election shall be issued. They are State officers.

PUBLIC SCHOOLS.

The annual report of the active, able and energetic State Superintendent of Public Instruction, including complete statistical statements of the condition and progress of our public schools, ending June 30, 1884, will be laid before the General Assembly in due time. This, together with the annual report for the year ending June 30, 1883, which will also be transmitted to you, shows such gratifying progress and improvement as to enable me to congratulate you upon the advancement of the system, showing that the amount annually raised for the support of free public schools is by no means a useless burden on the taxpayers of our State. It is a fact well known to all intelligent citizens that every modern civilized government, without an exception, has made the education of the people a paramount object of its existence and endeavor. That it is better than standing armies or penal codes, can be attested by the vast progress made in civilization and the arts of peace in the last century. The people, even in monarchical governments, have been thus strengthened in their liberties and prosperity. But whatever may be thought of the effect on the institutions of

these governments, there is no doubt in the minds of all intelligent statesmen, that where the right of suffrage is unrestricted, as it is in all truly democratic States, free popular education should be equally universal, as it is indeed vital to their existence. The legislators of Tennessee have wisely provided such a system for our people. The report of the State Superintendent exhibits a steady increase and improvement, both as to the number availing themselves of the advantages of free schools, and as to the efficiency of these schools. This report says that the figures exhibit a progress of the schools, keeping equal pace with the increase in the scholastic population. This report also exhibits a gratifying increase in the revenues for public schools, resulting either from a closer collection, a strict accountability of revenue officers, or a more liberal assessment upon property, or of all these combined. It is also shown that while the enrollment of pupils has been largely increased, and what is still more gratifying, the average attendance is at a still greater ratio, the cost of the system is greatly diminished, so that an extravagantly large balance of the school revenue is left on hand to be applied to the future efficiency of the system. This balance is in the hands of the various County Trustees, and in my judgment such legislation should be had as will compel its more rapid disbursement for the use and efficiency of our schools. I would also direct your attention to the utilization of the Institute system by the State and County Superintendents for the better training of teachers for the promotion of their efficiency in teaching. The State Superintendent shows in his report a marked increase in attendance upon these Institutes. The value and success of the public schools depends mainly on the competency of the teachers to promote the physical, intellectual and moral growth of the youth of our land, and that system is fatally defective which fails to provide for Normal work, both in the encouragement of Institutes and Normal schools. I recommend that Institute work, both through the agency of State and County Superintendents, be generously and wisely cherished, and that the State Normal College receive your fostering care and protection. In the case of the latter institution, I am led to believe that as large a number are not availing themselves of its manifest advantages as its superior facilities for training teachers would warrant.

The total amount of school funds received in the last scholastic year was \$1,239,952.64, showing an increase over last year of \$35,214.24. This fund is,

From the State.....	\$144,473.07
From Counties.....	713,953.66
From other sources.....	107,837.06
Balance on hand July 1, 1883.....	273,888.85

This statement is exclusive of the amounts received from a few counties from which the reports are yet incomplete. The total amount of expenditures for school purposes for the same year was \$919,242.26. This leaves a balance on hand June 30, 1884, of \$320,710.38. This surplus should be currently used in prolonging the sessions of schools, and, to this end, I suggest amendment to existing laws.

Reports show that our scholastic population for the year ending June 30, 1884, was—

White	420,997
Colored	150,832
Total	571,829

And this is exclusive of three counties in which the scholastic population for the year preceding was—white, 12,630; and colored, 932. This shows our entire school population at this time to be 585,391, an increase over last year of 23,895.

The diminution in the number of public schools in our State, taken in connection with the increased enrollment and attendance, I regard as a favorable indication, because there is too great a tendency on the part of school directors to multiply small schools with a limited attendance for the convenience of particular neighborhoods. The statistics show this unwise policy is being gradually abandoned.

I renew my recommendation made to the Forty-third General Assembly, to create the office of Assistant Superintendent of Public Instruction, at a salary of \$——, to take charge of the public schools for colored children, who shall, in the performance of his duties, confine his labors to the colored scholastic population, and be subject to the supervision of the State Superintendent, to his decisions relating to the school law, and to all orders emanating from his office. He should report to the State Superintendent from time to time as he may be required; should visit and inspect the colored schools of the State, and make such suggestions as he may deem necessary. He should be appointed in such manner as the Legislature may indicate, and hold his office as the Superintendent does, and be subject to the same obligations. Time and reflection have strengthened me in the conviction that additional force is required to aid the State Superintendent in the discharge of his arduous and important

duties in order that the cause of popular education may be more efficiently served, and good policy requires that the colored people should have a Superintendent of their own, subject, however, as indicated, to the supervision of the State Superintendent.

UNIVERSITY OF TENNESSEE.

There have been of late years some embarrassments connected with this institution in its management, of which it now seems happily relieved, and I am gratified to state it is now progressing under very favorable auspices. Herewith I transmit elaborate reports of various departments of the University, which have been furnished from the proper sources. Not to make invidious distinctions, I beg leave especially to call your attention to the reports from the Agricultural Department and its Experiment Station—a somewhat novel feature in educational affairs, and of special interest to the farming community.

The University of Tennessee has long been fostered by the State: is an institution in which she should take decided interest, and it is hoped its future usefulness will be unimpaired and its progress unimpeded.

I regret to ascertain, through the reports, that many of the scholarships in the University to which certain districts are entitled, are vacant, which should not be the case, there being allowed two appointments upon the recommendation of each Senator and three upon that of each Representative. This institution being a State institution, aided and sustained by the State, and giving advantages to students in the way of expense—those appointed having no tuition to pay—with its facilities for the successful training of youth in all the various branches being equal to the best institutions of the kind in the country, should be most liberally patronized from all parts of the State. Its excellent corps of Professors, its buildings, its library and apparatus, together with its healthful locality, make it an object of much attraction to the seekers of learning.

SCHOOL FOR THE DEAF AND DUMB.

The nineteenth Biennial Report of the Board of Trustees and Officers of the Tennessee Deaf and Dumb School at Knoxville, herewith submitted, shows that institution to be under excellent management and in a flourishing condition. The number of pupils admitted to the white department of the institution during the two

years is 151; average attendance, 100. Number of pupils admitted to the colored department during two years, 25; average attendance, 17.

The physician reports the hygiene almost perfect. No instance of death has occurred in the white department, and only one in the colored department in two years.

Most gratifying progress has been made in the educational departments. The sign language has accomplished wonders, and one class in oral methods has been continued for two years with much success and promise.

The expense of the institution, it is claimed, is a much less sum than has ever before been reached in the support of an equal number of pupils. Comparing the expenditure per capita of twenty-eight similar institutions, it is found that they average \$280 per capita, whereas the expenditure per capita for our institution is \$207, or twenty-six per cent. less.

The Trustees set forth in detail the wants and needs of the school, and ask of the Legislature a sufficient appropriation to support the increased number of pupils; to make necessary repairs and improvements, and to purchase land and buildings for the colored department. These needs are fully explained in the accompanying reports. I leave to your better wisdom what course to take in regard to increased expenditure called for.

The State should deem it a pleasure no less than a duty to properly and comfortably support this class of her unfortunate yet deserving children. In remote portions of the State there are many of these helpless little ones, living in indigence and ignorance, improperly cared for and almost without friends. Ignorant of the fact that the State has provided for them a home and sustenance free of cost, the Executive is frequently importuned through correspondence to do something to ameliorate their unhappy condition. To extend the hand of aid to them is not only humane, but the privilege of a bright and noble civilization.

BLIND ASYLUM.

This institution is efficiently doing its duty in educating the sightless for reasonable activity and participation in the work of life.

Its administration has been characterized by conspicuous intelligence and economy. It has sixty-one white and eight colored

inmates. Besides literary education, many are securing industrial educations. Ordinary expenses for the last two years have averaged \$12,656 15, and the sum of \$7,515.08 has been expended for extraordinary improvements and special purposes set forth in the last act of appropriation. Balance on hand, \$5,550.

Of the 2,028 blind in the State, by last census, there are about 212 persons within the limits of age of admission, of whom only sixty-nine are in the asylum.

For more detailed information I refer to the report of the Superintendent, Prof. L. A. Bigelow, which shows with great particularity the successful working of this institution.

In view of the importance and interesting character of this work, I would suggest that an adequate appropriation be made to enable this institution to compass larger results.

HOSPITAL FOR INSANE.

Enlightened philanthropy is everywhere profoundly interested to give the suffering insane the most helpful and tender ministrations. Tennessee in a spirit of commendable liberality is using the public treasure to place her insane hospital system upon a basis of the best possible efficiency.

Large results in good have already been accomplished, and it is a matter of deep interest that in the future the system may be so extended and perfected as to reach in its benefits all the unfortunate insane of our population.

The Tennessee Hospital for the Insane, under the Superintendency of Dr. John H. Callender, had 412 patients on December 19, 1884, four more than at same date two years ago, and twenty-seven in excess of the number for any previous biennial term, and with an average attendance of 400, being an increase over the past. The number of State charity patients, as fixed by the laws of admission, is in excess, chiefly due to the mandatory commitment of insane persons under criminal indictment by some of the courts of the State. This and other departures from the enactments appertaining to asylums are clearly set forth in the able and elaborate report of the Superintendent, Dr. John H. Callender, and special attention is hereby called to the same for legislative consideration and action.

Hospital receipts amounted to \$147,932.55, and disbursements for ordinary support of patients were \$138,945 69, leaving a balance on hand, December 19, 1884, of \$8,986.86. The cost per patient per an-

num was \$173.68, or at the rate of forty-seven cents daily *per capita*. Your committee will be able, when visiting the asylum, to see the practical improvements and benefits therefrom.

EAST TENNESSEE INSANE ASYLUM.

The State, cherishing a deep interest in the care and comfort of the unfortunate insane within her limits, and especially in the welfare of those far distant from the central asylum, and living in East Tennessee, with commendable foresight and wisdom, purchased, some time since, that delightful and valuable site, Lyon's View, near Knoxville, as the location for an East Tennessee Insane Asylum.

At its last session, the Legislature very wisely appropriated the sum of \$80,000.00 in aid of the erection of such an institution at that point. Accordingly, after adjournment of the General Assembly, and agreeably to the provisions of law relating to the same, the Executive appointed three discreet business citizens of high character and fine practical intelligence, R. H. Armstrong, J. C. Flanders and Columbus Powell, all of Knoxville, to constitute a Board of Directors, who, promptly organized, and elected W. H. Cusack, of Nashville, architect, and Dr. Michael Campbell, of Nashville, superintending physician of construction.

That the Board might adopt the most approved plan for the construction and equipment of the institution, the Governor suggested the propriety of one or more of the Directors, with the Architect and Superintending Physician, visiting some of the best established insane asylums in the North and East, that they might intelligently select from among them the best possible model by which to execute their trust in the building of a similar institution near Knoxville. The committee, consisting of Messrs. Armstrong, Flanders, Powell, and the Superintending Physician and Architect, visited many famed asylums, and returning, adopted a plan embracing the latest modern improvements, both sanitary and architectural.

A safe and judicious contract for work and material in the construction of suitable buildings was made with Messrs. Fulcher & Jones, who, under the careful supervision of both the Board of Directors and the Architect, have erected at Lyon's View commodious and tasteful buildings, of the most substantial material and in the most workmanlike manner. The following is an outline of the work done and that projected but not completed. The asylum consists of nine buildings, the main front 472 feet long; the wards consist of 174 rooms, that will accommodate

from 250 to 300 patients. There is an administration building, male and female wards, chapel, kitchen, boiler-house, engine-house and laundry, all made of the best material. Of the appropriation, some \$69,000.00 have been expended.

No more beautiful and more desirable spot could have been chosen for an Insane Asylum than Lyon's View. Within four miles of the city of Knoxville, high in elevation, commanding a full view of the river and the adjacent heights with their attractive scenery, the location possesses in itself all the requirements that could possibly be desired in an institution designed for the comfort, care and cure of the unfortunate insane. When completed, the East Tennessee Asylum will be one of the most stately and best equipped in the country, and stand an honorable monument to the munificent charity of Tennessee. The Board of Directors will shortly make special report to the General Assembly and ask additional appropriation to complete the work in hand, and to properly fit and furnish the Asylum for the early reception of patients.

It is recommended that the amount needed be accordingly appropriated. It affords me pleasure to be able to bear, officially, testimony to the intelligence and faithfulness with which the Directors, the Architect and Superintending Physician have discharged their trust.

The land attached to Lyon's View has been rented out for several years, and the claims for unpaid rent are in the hands of the Attorney-General and the Board, for settlement. I confidently commit this important charitable work to the wisdom of intelligent legislators and invoke in its behalf an appropriation of necessary public funds.

STATE BOARD OF HEALTH.

At no time since the establishment of this Board, has its efficient working been of greater importance to the people of Tennessee than now. The great mortality and material damage inflicted upon some of the most noted and populous cities in France and Italy within the last few months, have caused the most serious alarm throughout Europe and America. Everywhere active sanitary measures are taken to forestall the impending evil.

Here in Tennessee, so far as State action is concerned, we have an instrumentality which has satisfactorily stood the test of experiment and trial in the past, and is at this time putting forth every effort to prevent the cholera from coming to Tennessee. In

1879, the entire State had reason to dread a repetition of the terrible scenes of 1878. The State Board, however, its powers and means having been enlarged by the General Assembly of 1879, afforded relief to the distressed, and prevented the epidemic from spreading. In the past two or three years, the State Board, co-operating with local authorities in various portions of Tennessee, has confined the ravages of small-pox to a very limited area. Judging from the statistics of other States, the saving of human life was very great, and the material loss prevented must be estimated at many thousands of dollars.

An essential aid to the proper working of a Health Department is the systematic and complete collections of the immense mass of facts known as "Vital Statistics." The General Assembly of 1881, enacted a law under which much valuable information was gathered. This law perhaps was defective in some points, and could have been judiciously amended, though the last General Assembly struck it from the statute book. I commend the State Board of Health to your favorable consideration in such legislation as they may bring before your honorable body.

CONTAGIOUS DISEASES AMONG STOCK.

Contagious diseases among stock is a source of much apprehension to the stock-growers of the State, especially so as some very destructive diseases of that class have been known to prevail in some of our neighboring States. Several of the States have enacted laws to prevent stock infected with contagious diseases from entering the State, and to destroy the disease if it exists in their borders. No such law is as yet upon the statute books of our State, and I recommend that some similar statutory provisions be promptly enacted for Tennessee. I especially urge prompt action in this matter for the reason that within the last few days I am in receipt of a telegram from Geo. B. Loring, United States Commissioner of Agriculture, at Washington City, that on December 31st last, there was shipped from Cynthiana, Ky., to Jackson, Tenn., a herd of Jersey cattle infected with pleuro-pneumonia—the most destructive of cattle diseases. I immediately notified our Commissioner of Agriculture, and some of the local authorities of the fact, but I had no legal power to furnish necessary relief, there being no provision made to meet such emergencies, the only law touching such cases being found in Sections 2162-3 of the Code of Tennessee, which only punishes the party for bringing them into the State.

JACKSON STATUE AND TOMB.

By an act of the Forty-second General Assembly, April 6, 1881, an appropriation of \$2,000.00 was made for the purpose of having a base placed under the equestrian statue of General Andrew Jackson, on the Capitol grounds. The committee to whom it was entrusted, composed of T. W. Dick Bullock, chairman; Hon. Jno. M. Lea, Hon. D. A. Nunn, Hon. Horace H. Harrison and Dr. W. P. Jones, have made a report to your Honorable Body, through the Executive, that they have accomplished the duty assigned them. The work was well done, out of durable material, has been paid for, and the vouchers for the same accompany the report.

Under the joint resolution of the last General Assembly, March 8, 1883, the Governor was directed to have certain repairs made on and about the tomb at the Hermitage, of General Jackson, limiting the amount to \$350.00. I have the honor to report to the Forty-fourth General Assembly that the work contemplated was contracted for with the firm of Oman & Stewart. I regret the amount suggested in the resolution was not a little larger, as it was insufficient to have done that which was needed. However, I confined myself to the \$350.00 named in the resolution, made the contract for the work, but being so near the end of the legislative session, the work was not completed before the adjournment; hence, the report could not have been made during the session, as required. Although the work was completed soon after the adjournment, there had been a failure, a mere oversight, to name said amount in the appropriation bill; the result is Oman & Stewart are without their pay, and I have to suggest that you appropriate, at an early day, the required amount of \$350.00 to meet this obligation.

SEAL OF THE STATE.

I repeat here what I said to the Forty-third General Assembly as to the Seal of the State:

"It is a part of current history that within the last few months, under the supposed authority of section 7th of chapter 4th, the act known as the "60-6 Act," passed at the third session of the Forty-second General Assembly of Tennessee, 1882, that the Seal of the State was carried beyond the limits of Tennessee to wit: to the State and city of New York, where bonds funded under said act were impressed with it.

"Believing that article III. and section 15 of the Constitution of Tennessee does not contemplate such power, and that it is alike of doubtful con-

stitutional authority as of public policy, and a dangerous precedent, I suggest a positive enactment by you, forbidding said Seal to be taken, in time of peace, beyond the limits of the State, and that the same shall be at all times kept and used alone at the capital of Tennessee."

In conformity to this recommendation an Act was passed by the last General Assembly, and after being signed by both Speakers, as was subsequently ascertained, amidst the confusion consequent on the closing scenes of the session, inadvertently left in the drawer of the Speaker of the Senate, with two other bills of local character, and never reached the Governor for his signature. I think it should be the law of Tennessee, and trust you will so enact.

MINERAL HOME RAILROAD BONDS.

I beg to repeat here what I said in my message to the Forty-third General Assembly in regard to the Mineral Home Railroad Bonds:

"Under the Acts of December 10, 1866, and December 14, 1867, \$100,000.00 in bonds were authorized, upon the performance of certain conditions, to be issued to the Mineral Home Railroad Company.

"In disregard to the creditors and in violation of law, the President of the Company procured one hundred bonds of the denomination of \$1,000 each, to be issued to him on the 2nd day of October, 1869.

"On the 1st of July, 1870, an Act was passed which directed the Attorney-General to institute suits to protect the State against these bonds.

"The bonds were sold by the Company in January, 1870, and the proceeds deposited in the Exchange and Deposit Bank at Knoxville.

"The State, through the proceedings instituted by the Attorney-General, attached this fund (and secured, and for several years has had the same) amounting to about \$35,000.

"The State rightly refuses to recognize or pay any of the bonds. For that reason, the money to which I have referred ought to be paid back, as it is not the policy or purpose of Tennessee to realize profits, but merely to protect the people by the course adopted with reference to outstanding bonds. The Mineral Home bonds ought not to be either recognized or paid; but the moneys attached and taken by the State ought to be refunded. Not a dollar of it belongs to Tennessee, and she ought not to keep it. I therefore suggest, as the best and most equitable method, that

the net balance of this fund, after defraying all expenses which have been incurred, be refunded *pro rata* to holders of said bonds upon their delivering up the same."

THE TAXING DISTRICT.

I hereby transmit the Biennial Report of Hon. David P. Hadden, President of the Fire and Police Commissioners of the Taxing District

(Memphis) of Shelby County, Tennessee, made in conformity to the act establishing said District. I take pleasure in referring you to it as a report gotten up with much care and particularity, and showing with great explicitness the operations of said Taxing District.

CAPITOL BUILDING AND GROUNDS.

The Capitol building and grounds have been looked after with care and attention, but being a large building and spacious grounds, visited daily by great numbers of people, there is necessarily constant supervision required to keep them in proper repair and an object of ornamentation creditable to the State. A committee should be appointed to look after this matter, whose work will be greatly aided by investigation of the report of Superintendent Hayden March, herewith transmitted.

THE STATE ARMORY.

Some changes may be necessary in the Armory at the Capitol for the preservation of the arms of the State, and for keeping them under proper classification and order. The laws touching the arms of the State are defective, having become to a great extent obsolete, and, as a remedy, I call your attention to the report of the Adjutant-General, which, I think, makes some practical suggestions, that, if adopted, will contribute to the efficiency of the Armory and its contents.

CONCLUSION.

I beg to call the attention of the General Assembly to the fact that much confusion ordinarily exists in most legislative bodies as they draw to a close, and in consequence thereof many material matters, especially those that ought to be named in the appropriation bill, are lost sight of, or amid the rush of business they are either neglected or their advocates are unable to get action upon them, hence they are lost. It is suggested, in view of these facts, that a resolution be passed that no bill requiring an appropriation from the Treasury shall be introduced within twenty days of the adjournment of the Legislature.

I am under obligations to the officers of the State for their courtesy and promptness in furnishing me with full and intelligent reports

of the condition of their several departments, which have greatly aided me in keeping knowledge of the State's affairs. All of which are herewith transmitted. .

I have reason to hope and believe that your labors, while arduous, will be rendered with care and patience, looking alone to the public good, and that they will meet the approval of your constituency and reflect credit upon the State and upon you as a body and individually.

WILLIAM B. BATE.

Executive Office, Nashville, January 12, 1885 .



BIENNIAL REPORT

OF THE

COMPTROLLER

OF THE

STATE OF TENNESSEE,

TO THE

FORTY-FOURTH GENERAL ASSEMBLY.

JANUARY 5, 1885.

P. P. PICKARD, COMPTROLLER.

NASHVILLE:

ALBERT B. TAVEL, PRINTER TO THE STATE.

1885.

LIST OF COMPTROLLERS.

DANIEL GRAHAM,

From January 23, 1836, to October 4, 1843.

F. K. ZOLLICOFFER,

From October 4, 1843, to October 15, 1849.

B. H. SHEPPARD,

From October 15, 1849, to October, 1851.

ARTHUR R. CROZIER,

From October, 1851, to October, 1855.

JAS. C. LUTTRELL,

From October, 1855, to October, 1857.

JAS. T. DUNLAP,

From October, 1857, to October, 1861.

JOS. S. FOWLER,

Appointed, from——, to May, 1865.

S. W. HATCHETT,

From May, 1865, to October, 1866.

G. W. BLACKBURN,

From October, 1866, to June, 1870.

E. R. PENNEBAKER,

From June, 1870, to January, 1873.

W. W. HOBBS,

From January, 1873, to May, 1873.

JNO. C. BURCH,

Appointed, from May, 1873, to January, 1875.

JAS. L. GAINES,

From January, 1875, to January, 1881.

JAMES N. NOLAN,

From January, 1881, to January, 1883.

P. P. PICKARD,

From January, 1883, to January, 1885.

REPORT.

STATE OF TENNESSEE,
COMPTROLLER'S OFFICE,
Nashville, Dec. 20, 1884.

To the Legislature:

In accordance with the provisions of the statute, which makes it the duty of the Comptroller to present to the General Assembly a correct and regular statement of the accounts and vouchers of his office, I beg to submit this, my Biennial Report, for the two years ending December 19, 1884, together with such explanatory remarks and suggestions as seem pertinent.

It will be found to contain the following statements and tabulations:

A. Cash account, showing receipts and disbursements, and balance cash in State Treasurer's hands December 19, 1884.

B. Statement of Receipts, and on what account, from December 20, 1882, to December 19, 1884, inclusive.

C. Statement of Disbursements, and on what account, from December 20, 1882, to December 19, 1884, inclusive.

D. Statement of amount of payable warrants issued from December 20, 1882, to December 19, 1884, inclusive, and showing amount of warrants outstanding.

E. Statement of payable warrants issued, and on what account, from December 20, 1882, to December 19, 1884, inclusive.

F. Tabular statement, showing amount of appropriations for two years, to March 19, 1885; amount drawn to December 19, 1884, and amount remaining undrawn December 19, 1884.

G 1. Table of taxable property in East Tennessee for 1883, (compared with 1882).

G 2. Table of taxable property in Middle Tennessee for 1883, (compared with 1882).

G 3. Table of taxable property in West Tennessee for 1883, (compared with 1882).

G 4. General recapitulation for 1883, (compared with 1882).

H 1. Table of taxable property in East Tennessee for 1884, (compared with 1883).

H 2. Table of taxable property in Middle Tennessee for 1884, (compared with 1883).

H 3. Table of taxable property in West Tennessee for 1884, (compared with 1883).

H 4. General recapitulation for 1884, (compared with 1883).

I. Valuation of taxable property in the State; average value per acre of lands, and the State tax levy for a series of years.

K 1, 2 and 3. Average value per acre of land, by counties and geographical divisions, for the years 1871 to 1884, inclusive.

L 1.. Railroad Property—Length of roads; assessed value per mile; aggregate valuation of each road, and the aggregate value of all the railroads in the State, as returned to this office by the State Board of Railroad Assessors Sept 19, 1883.

L 2. Railroad Property—Length of roads; assessed value per mile; aggregate valuation of each road, and the aggregate value of all the railroads in the State, as returned to this office by the State Board of Railroad Assessors July 17, 1884.

M 1. Railroad Property—Distribution of value to the several counties for the year 1883.

M 2. Railroad Property—Distribution of value to the several counties for the year 1884.

N. Telegraph Property—Showing the number of miles; assessed value per mile; aggregate assessed valuation, and the distribution of the same to the several counties in the State for the years 1883 and 1884.

O 1. Privilege taxes, East Tennessee, reported and collected by County Court Clerks, and sources from which same was collected, from December 20, 1882, to December 19, 1883, inclusive.

O 2. Privilege taxes, Middle Tennessee, reported and collected by County Court Clerks, and sources from which same was collected, from December 20, 1882, to December 19, 1883, inclusive.

O 3. Privilege taxes, West Tennessee, reported and collected by County Court Clerks, and sources from which same was collected, from December 28, 1882, to December 19, 1883, inclusive.

P 1. Privilege taxes, East Tennessee, reported and collected by County Court Clerks, and sources from which same was collected, from December 20, 1883, to December 19, 1884, inclusive.

P 2. Privilege taxes, Middle Tennessee, reported and collected by County Court Clerks, and sources from which same was collected, from December 20, 1883, to December 19, 1884, inclusive.

P 3. Privilege taxes, West Tennessee, reported and collected by County Court Clerks, and sources from which same was collected, from December 20, 1883, to December 19, 1884, inclusive.

Q. Tabular statement, showing the amount of State tax assessed for the year 1882, in the several counties of the State; the amount of abatements, and the net amount paid into the State Treasury, being a full and complete exhibit of the State tax account of each County Trustee for the year 1882.

R. Tabular statement, showing the amount of State tax assessed for the year 1883, in the several counties of the State; the amount of abatements, and the net amount paid into the State Treasury, being a full and complete exhibit of the State tax account of each County Trustee for the year 1883.

S 1. Tabular statement, showing the amount and source of current revenue collected from the several counties of the State during the year 1883.

S 2. Tabular statement, showing the amount and source of current revenue collected from the several counties of the State during the year 1884.

T. Tabular statement, showing amount of warrants issued on account of "Arrest of Fugitives," from December 20, 1882, to December 19, 1884, inclusive, giving name of fugitive, crime committed, by whom reward was offered, etc., etc.

U 1. Criminal Prosecutions—Tabular statement, showing amount paid to each county, from December 20, 1882, to December 19, 1883, inclusive, arranged according to judicial circuits.

U 2. Criminal Prosecutions—Tabular statement, showing amount paid to each county from December 20, 1883, to December 19, 1884, inclusive, arranged according to judicial circuits.

V. Delinquents—Tabular statement, showing the amounts reported due by delinquents, from December 19, 1882, and what disposition, if any, has been made of each amount since that date.

W. Delinquents—Tabular statement, containing list of delinquents December 19, 1884, and amounts due by each.

X. Interest School Fund—Tabular statement, showing the semi-annual apportionment among the several counties of the State, according to scholastic population, for the years 1883 and 1884.

Y. Tabular statement, showing amount of certificates of indebtedness issued in lieu of the Torbett issue Bank of Tennessee money, taken up and cancelled as provided in acts of 1883; amount received to December 19, 1884, and amount outstanding December 19, 1884, arranged according to series.

Z. Tabular statement, showing amount and source of back taxes and other dues to the State collected; commissions paid, and net amount paid into the State Treasury by the attorneys for the State from December 20, 1882, to December 19, 1884, inclusive.

ZZ. Bonds—Tabular statement, showing, "by letter," the number of Bonds funded under act of 1883, and the number of settlement Bonds issued therefor; also the Bonds outstanding due by the State of Tennessee.

A—CASH ACCOUNT.

Your attention is called to this statement, showing balance in Treasury December 19, 1884, \$645,214.83, after having disbursed \$1,765,072.38.

D—OUTSTANDING WARRANTS.

This table shows the amount of pay warrants outstanding December 19, 1884, to be \$115,964.83.

I feel confident that there is some discrepancy existing in this account, and the number of warrants outstanding will not exceed thirty or forty thousand dollars. Subsequent to 1873, the pay warrants issued have been recapitulated, abstracted and proven on the last of each month, but prior to that time such was not the case, but the amounts simply set down and carried forward from day to day, without being abstracted and proven.

E—EXPENSES.

I call your attention particularly to this table, as it is a complete exhibit of the amount of payable warrants issued for two years, ending with December 19, 1884, from which (by taking into consideration the amount of Bank of Tennessee new issue certificates

now due and outstanding, with those falling due within the next two years), you can form a very correct idea of the amount necessary to run the State Government for the next two years.

Total amount of warrants issued \$1,766,207 15

From which deduct the following items
that do not enter, properly, the regular current expenses of the State Government :

Interest State debt.....	\$251,569 92
Interest School Fund.....	290,578 08
Interest Spencer T. Hunt Fund	888 32
Court of Referees, salary.....	38,858 33
Court of Referees, expense.....	4,678 52
Funding expense.....	11,458 64
Bank of Tenn. money, new issue, expense	3,629 74
Arrest of M. T. Polk.....	10,000 00
Hosp. for Insane, Mid. Tenn. imp. fund	15,000 00
Hospital for Insane, East Tennessee...	69,931 29
Refunded Revenue	4,624 78
Tennessee Money, old issue, cancelled..	166 00
Tennessee Money, new issue, cancelled.	4,554 50
Treasury Warrants, cancelled.....	9 00
Removal of Penitentiary.....	663 45
Jackson Statue.....	2,000 00

Total \$ 708,610 57

Leaving as net current expenses for two years, ending with December 19, 1884..... \$1,057,596 58

PENSION TO BLIND.

Under the act of 1883, providing for the relief of soldiers losing their eyesight in the late war, I have the following names on the pay roll, who are now drawing pensions under said act, except Mr. F. M. Beazley, who has recently died. John Erskine, John Walbridge, F. M. Beazley, John W. Sawrie, Allen P. Morris, R. G. Hall, Eugene Butterworth and Alfred Graves. I trust that the necessary appropriations will be made to continue their pension.

CRIMINAL PROSECUTIONS.

There was expended on this account during the last two years the sum of \$379,141.68, which is over one-third of the amount of the net current expenses of the State government, and by comparing the amount with the reports of former Comptrollers, you will see that the costs accruing against the State, on this account, is steadily increasing, notwithstanding the fact that in auditing them I have exercised great care and diligence, and have saved the State large sums of money by cutting out items illegally taxed, and though it may seem to some that I have been over-zealous in looking to the interest of the State in this particular, I will say such is not the case, and that I have invariably conformed to the statutes, the rulings of the Supreme Court, and the advice of the State's Attorney-General, relating to such matters.

I would therefore *earnestly* recommend that each county be required to pay its own costs in criminal prosecutions, except in cases of conviction and imprisonment in the Penitentiary.

In this connection, I desire to call your attention to a forgery that was practiced on this office to the amount of about \$1,800.00, in the shape of jail and boarding jury bills. Said bills were presented, properly sworn to, and approved by the judge and attorney-general, and purported to be from the Jailer of Marshall county, signed "J. W. Hinde, Jailer," which was detected by me in August, 1884. I immediately communicated the fact to the Governor, and after consultation with him, I employed Chief of Detectives, R. M. Porter, to ferret out the matter, which resulted in the arrest of John H. Hide, a former employe in this office, who now stands indicted in the Criminal court of Davidson county. I paid for said arrest the sum of \$100.00 out of my personal means, and have employed counsel to assist in the prosecution, which will cost, I presume, \$100.00 additional.

TAXABLE PROPERTY.

Your attention is called to tables G and H, showing the amount of taxable property in the State for 1883 and 1884, compared with 1882 and 1883.

Total value of taxable property in the State for the year 1882 was \$221,929,813.00, while for 1883 it was \$222,637,873.00, an increase for 1883 over 1882 of \$708,060.00. State tax for 1882, at

twenty cents on the \$100.00, is \$443,859.43, and for 1883, at thirty cents on the \$100.00, the State tax is \$667,913.28, showing an increase of \$224,053.85.

Total value of taxable property for 1883 is \$222,637,873.00, while for 1884 it is \$226,844,184.00, showing an increase for 1884 over 1883 of \$4,206,311.00. While there appears to be an increase in real estate, there is considerable decrease in the value of lands—the increase mainly consisting in value of town lots. The increase in personal property in 1884 over 1882 is \$85,039.00. The value of all taxable property in the State has, for the year 1884, reached its highest point since 1876, and if the tax-payers will exercise conscientious care in listing and valuing their property for taxation, and the assessors would be more watchful and vigilant in the discharge of their duty, the rate of increase, as above indicated, would continue.

It is a mistaken idea that if A's house and lot is worth \$10,000.00, he saves money by returning it for assessment at \$5,000.00. To the contrary, the larger the value, of course the smaller the rate of taxation must be.

PRIVILEGE TAX.

By referring to tables O 1, 2 and 3, and P 1, 2 and 3, you will see the amount of collections through county court clerks from merchants, liquor dealers, etc., amounting, for the year 1883, to \$321,416.57, and for the year 1884 to \$334,870.04; increase in 1884 over 1883, \$13,453.47.

TRUSTEES' STATE TAX, 1882 AND 1883.

Particular attention is called to tables Q and R, which are a complete exhibit of Trustees' State tax for 1882 and 1883. It is gratifying to note the promptness with which all the county officers charged with the collection of revenue have reported and paid over same to this office, and of the unusual efforts made by trustees to settle their accounts as the law requires. There is but one account remaining unclosed for the year 1882, and out of a tax aggregate amounting to the sum of \$443,859.43, there was collected and paid into the Treasury the sum of \$401,377.11, after allowing all abatements, such as commissions, county court releases, land sales, etc., which is only a small fraction over nine per cent. as the cost of collection, when fifteen per cent. has heretofore been reckoned as an estimate.

Out of a tax aggregate for the year 1883 of \$667,913.28, there has been collected and paid into the Treasury the sum of \$598,995.00, after allowing all abatements, such as commissions, county court releases, land sales, etc., which is only about ten per cent. as the cost of collection, notwithstanding there are several thousand dollars yet due, the greater part of which will in all probability be paid prior to January 1, 1885, which would reduce the cost of collection for 1883 to even less than that of 1882.

RAILROADS.

It affords me much pleasure to say that all the railroads in the State, liable for taxation, have been exceedingly prompt in regard to the payment of their taxes, with but one exception, that is the Tennessee and Sequatchie Valley Railroad Company.

DELINQUENTS.

Your attention is called to tables V and W, giving a detailed statement of the amount due the State from delinquent revenue officers. On December 19, 1882, there was due the State from delinquents the sum of.....\$347,918 92

And on December 19, 1884, there is due the State

from delinquents the sum of	316,342 40
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Showing a reduction in the last two years of.....\$	31,576 52
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Z—BACK TAXES.

In table Z may be seen a full exhibit of the back taxes collected, by whom, and from what sources, during my term of office.

The large amount of delinquent revenue due the State, counties and towns furnishes a sufficient reason for the rigid enforcement of the revenue laws. It will appear from this exhibit how unequally the burdens of government have fallen upon the citizens of the State. It is unjust that so much property, not exempt by law, should escape taxation. It is evident, from an examination of the Comptrollers' reports, that an unjust proportion of the taxes are collected from the lands of the State. In 1882 the real estate in Tennessee was assessed at nearly \$200,000,000.00, while the entire personal property was assessed at about \$26,000,000.00, so that the great burden of taxation is placed upon the lands, which afford the least income, and the practical effect of the laws, as they have been executed, is to exempt from taxation the greater part of the per-

sonal property, such as bonds, stocks, notes, money, etc., and for the most part of that character of property which yields the greatest income—hence the complaint of land owners.

It has been an especial feature of this administration to impress upon those entrusted with collection of revenue, and particularly the delinquent revenue, to exercise all lawful means to bring to light every species of property which has heretofore unjustly escaped taxation, to the end that every citizen may be equally protected by the law, and be required to share his part of the public burden. In the discharge of these, not always agreeable, duties, the agents and attorneys representing the State have collected a very large amount from property not heretofore assessed for taxation, and the fruits of this work will be felt in future years, for it will increase the assessment roll. There are now pending suits of vital importance to the people of Tennessee. I deem it proper to refer to some of the suits pending, and which have been disposed of. Messrs. Champion & Head, J. B. Daniel, S. Watson and J. W. Baker commenced proceedings against the Louisville and Nashville Railroad Company and its branches for the purpose of collecting taxes due the State prior to 1875, which finally resulted in a settlement by which the State received \$76,000.00 in currency, less the commissions paid the clerk and master, and those of the attorneys in the case, which were ten per cent. of the amount collected, although the statute authorized the payment of fifteen per cent. in such cases.

The same attorneys prosecuted through the Supreme Court a similar claim against the Nashville, Chattanooga & St. Louis Railway for assessed taxes due from the Northwestern Branch from 1871 to 1883, inclusive. This suit was instituted under the direction of my predecessor in office, J. N. Nolan, but the Court held that the charter of exemption from taxation passed by the sale under the decree of the Court, so that nothing was received in this case.

Said attorneys also commenced proceedings, by mandamus, to subject the shares of stock in the hands of the shareholders of the Nashville, Chattanooga & St. Louis Railway Company and of the Nashville & Decatur Railroad Company to taxation. These suits were removed by the defendants to the Federal courts, and are now pending in the Supreme Court of the United States, under the adverse decision of the United States Circuit Court.

There are also two suits pending in the Supreme Court of the United States, in which the State is represented by T. E. Matthews and Champion & Head, to test the liability of sleeping-car companies to pay the privilege tax levied by the act of 1877, and carried into subsequent acts. These are suits of great importance, involving the liability to taxation of property worth many millions of dollars, and, in my opinion, these cases do not come within the meaning of the act passed in regard to delinquent revenue, and the attorneys have never received any compensation for services rendered in any of these suits except the one as above stated, and I therefore recommend that an appropriation of sufficient amount be made to pay the expenses made necessary in the preparation of these causes, and a reasonable compensation for services rendered and to be rendered, in order to test these important questions. I desire, in this connection to call your attention to the fact that the compensation now allowed by law (ten per cent. of the amount collected) is inadequate to secure the collection of taxes due upon lands which have been sold and bought in by the State. In order to prevent confusion, and secure prompt action on the part of the officers of the State, I recommend that the act passed March 7, 1879, as amended by the act of March 27, 1883, be so amended that a reasonable time may be fixed as a limit within which the collectors of taxes may assess for taxation property which has improperly escaped taxation.

In order to secure the free alienation of real estate, and prevent injustice in individual cases, I recommend that such legislation be had as will limit to six years—the lien created upon assessed property, and thereafter the unpaid taxes to remain a personal obligation of the person against whom the taxes were assessed.

BONDS.

By referring to table "ZZ," you will find a statement of the bonds funded under the act of March 15, 1883, and the number of bonds outstanding, including estimated interest. Under this head I would first recommend that the "certificates" outstanding, which were issued under the funding act of 1882, be taken up and bonds issued for the same when presented in sums of \$100. Second, that detached coupons also be taken up and bonds issued for the same

when presented in sums of \$100. Third, that ——— bonds, amounting to several millions of dollars, which were printed for the issuance of the 100-3 bonds, and are in the hands of the Franklin Bank Note Company, New York, should be listed and destroyed, and also that the various plates used for the printing of said bonds and are in the hands of said company, shall be taken in charge by the State and destroyed or be put in some place for safe keeping.

It appears from the certified transcript of the Fourth National Bank, New York, that certain bonds were funded in August, 1869, in which were included two bonds known as white "A" bonds due January 1, 1870. It also appears that from the funding on November 4, 1882, that these two bonds, together with others, entered into the funding of 1882, and compromise bonds were issued for them, among the number, No. 6,352. Upon the presentation of this bond, No. 6,352, the funding board refused to fund it, as it occurred to them that bonds had been issued twice for the same bonds. I would therefore recommend that you cause such investigation as you may deem proper in this matter.

I also desire to report that bond No. 5,804, green "F," has been taken up and cancelled in book 2, page 147; also January, 1876, subsequent coupons in settlement of a judgment against Chambers & Foley, securities of Phillip Garvin, revenue collector of Shelby county, 1866-7, as per agreement of J. L. Gaines and M. T. Polk, under House Joint Resolution No. 73, page 328, acts 1875.

I also desire to report that I cancelled and returned bond No. 325, blue "B," upon which the State was endorser for the Nashville & Chattanooga Railroad, and delivered to them bond No. 5,414 of said railroad, which had been left as collateral security by act of Legislature 1847-8, chap. 169, page 272.

CONCLUSION.

The duties of this office are laborious and responsible. I have sought to perform them with diligence and fidelity, with a purpose devoted to the interest of the State and the rights of the people. How far I have succeeded is a question to be answered by the public voice. My conduct in the discharge of my official duties is open to inspection.

I cannot conclude, without tendering to your Excellency my profound thanks for the courtesy extended me during my official

term. To the revenue collectors, including clerks, trustees and attorneys, for the prompt manner in which they have executed their duties during the two years just closed; to Mr. W. H. Simonton, who has charge of the funding department, for the faithful, satisfactory and comprehensive manner in which he has conducted the same; and to Mr. J. W. Allen, my principal clerk, and Mr. Leon Trousdale, my assistant clerk, for the industry, accuracy and fidelity with which they have performed their respective duties.

Respectfully,

P. P. PICKARD,
Comptroller of the Treasury.

APPENDIX.

APPENDIX.

A—CASH ACCOUNT.

Balance cash in State Treasury, Dec. 19, 1882	\$ 508,015 08	
Cash received by Treasurer from Dec. 20, 1882, to Dec. 31, 1882....	57,069 65	
Cash received by Treasurer from Jan. 1, 1883, to Jan. 5, 1883.....	38,254 15	
Cash received by Treasurer, error as per report of Elliston to Investigat- ing Committee.....	1 74	
Total cash.....		\$ 603,340 62
Amount disbursements from Dec. 20, 1882, to Dec. 31, 1882, inclusive...	16,146 50	
Amount disbursements from Jan. 1, 1883, to Jan. 5, 1882, inclusive.....	47,786 77	
Total disbursements.....		63,933 27
Balance cash in Treasury Jan. 5, 1883.		\$ 539,407 35
Of the above balance there was turned over to Atha Thomas, Treas., by Investigating Committee.....	\$ 246,790 76	
Cash received by Treasurer from Jan. 31, 1883, to Dec. 19, 1884, Inc.....	2,099,563 18	
Total cash.....		\$ 2,346,353 94

DISBURSEMENTS.

Amount disbursements from Jan. 31, 1883, to Dec. 19, 1884, Inc..	1,701,139 11	
Balance cash in State Treasury Dec. 19, 1884.....		\$ 645,214 83

B—STATEMENT of Receipts, and on what Account, from December 20, 1882, to December 19, 1884, inclusive.

MONTHS.	AMOUNTS.	ACCOUNTS.	AMOUNTS.
Dec. 20, 1882, to Jan. 1, 1883.....	\$57,069 65	Trustees	\$916,526 16
Jan. 1, 1883, to Jan. 5, 1883	38,254 15	County Court Clerks.....	655,827 11
Jan. 5, 1883, to Jan. 31, 1883	79,010 01	Circuit Court Clerks.....	38,172 97
February, 1883.....	130,004 41	Chancery Court Clerks.....	24,519 87
March, "	71,731 16	Law Court Clerks.....	1,494 94
April, "	52,525 42	Supreme Court Clerks.....	10,685 09
May, "	72,924 29	Criminal Court Clerks....	9,876 43
June, "	37,381 84	Redemption of Lands.....	79,849 06
July, "	63,236 57	State Tax Insurance Co.'s....	54,705 00
August, "	51,580 47	State Tax Banks.....	10,100 00
September, "	41,162 75	State Tax Railroads.....	178,143 58
October, "	46,556 91	State Tax Express Company...	8,273 70
November, "	76,573 22	State Tax Mutual Ins. Agents..	30 00
To Dec. 19, 1883.....	92,732 15	State Tax Telegraph Co.'s....	1,500 52
Amount received one year to Dec. 19, 1883	\$910,743 00	Lessees State Penitentiary.....	156,318 11
Dec. 20, 1883, to Jan. 1, 1884.....	\$29,066 02	M. T. Polk.....	13,976 39
January, 1884.....	186,667 60	Legislative Expense, Miscellaneous, (Refunded).....	10 00
February, "	216,167 01	State Prosecutions, (Refunded)	68 56
March, "	189,187 29	Supreme Court Reports	13 50
April, "	116,976 12	Dyersburg, Miss. River Turnpike & Plank Road Co.....	465 66
May, "	67,070 09	State Penitentiary, sale of old property.....	100 60
June, "	60,750 87	Insurance Fees	18,558 00
July, "	88,487 73	Revenue Collectors.....	9,536 53
August, "	38,348 11	Court of Referees Expense, refunded.....	2 00
September, "	52,213 77	Interest State Debt.....	495 00
October, "	73,647 27	Funding Expense.....	264 00
November, "	50,379 64	Bureau of Agriculture, Statist's and Mines.....	699 35
To Dec. 19, 1884.....	115,182 46	Enumeration of Voters.....	1 00
Amount received one year to Dec. 19, 1884	\$1,284,143 98	Public Printing.....	699 55
Total amount received two years to and including Dec. 19, 1884.....	\$2,194,886 98	Sale of McMinnville & Manchester Railroad.....	3,974 30
		Total.....	\$2,194,886 98

**C—STATEMENT of Disbursements, and on what Account, from Dec.
20, 1882, to Dec. 19, 1884, inclusive.**

MONTHS.	AMOUNTS.
December 20, 1882, to January 1, 1883.....	\$ 16,146 50
January 1, 1883, to January 5, 1883.....	47,786 77
January 5, 1883, to January 31, 1883.....	63,635 90
February, "	50,001 70
March, "	61,313 23
April, "	137,633 47
May, "	33,572 78
June, "	72,000 39
July, "	112,128 52
August, "	56,518 55
September, "	68,656 28
October, "	34,492 60
November, "	35,852 44
To December 19, 1883.....	46,369 66
Amount disbursed one year to Dec. 19, 1883.....	837,108 79
Dec. 20, 1883, to Jan. 1, 1884	18,255 04
January, 1884,	156,729 36
February, "	53,025 32
March, "	46,654 05
April, "	61,326 08
May, "	48,430 25
June, "	55,365 10
July, "	196,848 51
August, "	47,820 42
September, "	78,778 15
October, "	67,396 57
November, "	47,040 82
To Dec. 19, 1884.....	50,293 92
Amount disbursed one year to December 19, 1884.	927,963 59
Total amount disbursed two years to and including December 19, 1884.....	\$1,765,072 38

C—STATEMENT OF DISBURSEMENTS—Continued.

ACCOUNTS.	Disbursements from Dec. 20, 1882, to Dec. 19, 1883, inclusive.	Disbursements from Dec 20, 1883, to Dec. 19, 1884, inclusive.	TOTAL.
State Prosecutions.....	\$183075 47	\$195179 92	\$378255 39
Interest State Debt.....	58016 42	192297 50	250313 92
Interest Spencer T. Hunt Fund.....	888 32	.....	888 32
Interest School Fund.....	149681 21	147167 63	296848 84
Judicial Salaries.....	93770 21	100662 26	194432 47
Executive Salaries.....	11157 23	10791 70	21948 93
Superintendent Pub. Instruct., Salary....	2177 83	1995 00	4172 83
Officers of Penitentiary, Salaries.....	5049 85	4899 84	9949 69
Railroad Commissioners, Salaries	3499 86	1999 92	5499 78
Court of Referees, Salaries.....	15058 32	23900 00	38958 32
Assistant Librarian, Salaries.....	541 59	458 26	999 85
Librarian, Salary.....	1333 30	999 96	2333 26
Attorney Gen'l and Reporter's Salary....	3000 00	3250 00	6250 00
Supt. Hosp. for Insane, Mid. T., Salary..	2000 00	2000 00	4000 00
Adjutant General's Salary.....	1243 33	1200 00	2443 33
Superintendent Capitol, Salary.....	450 00	350 00	800 00
Clerk Hire, Comptroller's Office.....	2498 29	2291 63	4789 92
Clerk Hire, Treasurer's Office	973 61	916 63	1890 24
Clerk Hire, Secretary State's Office.....	975 00	825 00	1800 00
Clerk Hire, Supt. Public Inst'n's Office...	499 92	499 92	999 84
Comptroller's Office Expense	791 65	512 00	1303 65
Treasurer's Office Expense	395 58	323 90	719 48
Secretary State's Office Expense.....	734 30	220 50	954 80
Executive Expense.....	580 72	361 15	941 87
Supreme Court Expense.....	6773 77	8001 65	14775 42
Capitol Expense.....	4778 96	4039 07	8818 03
Public Arms Expense.....	35 15	35 40	70 55
Court of Referees Expense	1878 27	2731 85	4610 12
Legislative Expense, Mis. 2d Ex. Sess..	100 00	.....	100 00
Legislative Expense, per diem and mil'ge	51871 96	.....	51871 96
Legislative Expense, Miscellaneous.....	5517 13	.....	5517 13
Library Expense.....	157 50	342 23	499 73
Funding Agency Expense.....	5629 78	5828 86	11458 64
Railroad Commission Expense.....	229 17	227 03	456 20
Common Schools Expense.....	5519 35	2831 52	8350 87
Tennessee Money, New Issue, Expense...	961 50	2693 24	3654 74
Hospital for Insane, Middle Tennessee...	87598 08	52750 00	140348 08
Hospital for Insane, East Tennessee.....	5941 50	63989 79	69931 29
Tax Aggregate.....	1065 75	1155 75	2221 50
Bureau of Agriculture, Statistics and M.	20000 00	11000 00	31000 00
State Normal College.....	4750 00	10891 65	15641 66
Pension to Blind.....	640 00	890 00	1530 00
Arresting Fugitives.....	11856 66	2008 84	13865 50
Lunatics to Asylum.....	858 06	749 42	1607 48
Express Charges.....	54 15	273 00	327 15
Tennessee Money, New Issue, canceled..	4529 50	.....	4529 50
Tennessee Money, Old Issue, canceled...	166 00	.....	166 00
Treasury Warrants canceled.....	9 00	.....	9 00
Tennessee School for Deaf and Dumb...	28800 00	22500 00	51300 00
Tennessee School for Blind	16950 00	16000 00	32950 00
Supreme Court Reports.....	2429 74	2443 22	4872 96
Land Sales.....	302 00	10000 00	10302 00

C—STATEMENT OF DISBURSEMENTS—*Continued.*

ACCOUNTS.	Disbursements from Dec. 20, 1882, to Dec. 19, 1883, inclusive.	Disbursements from Dec. 20, 1883, to Dec. 19, 1884, inclusive.	TOTAL.
State Board of Health.....	3256 05	2571 28	5827 33
Removal of Penitentiary.....	663 45	.....	663 45
Fees of Secretary of State.....	1108 50	.....	1108 50
Enumeration of Voters.....	178 73	.....	178 73
State Penitentiary Building, Repairs, etc.	3125 78	1251 42	4377 20
Refunded Revenue.....	1292 23	3318 24	4610 47
Publishing Governor's Proclamation....	13 75	307 55	321 30
Railroad Assessment.....	4001 80	2189 30	6191 10
Public Printing.....	15130 01	2036 55	17166 56
Publishing Acts.....	543 50	.....	543 50
Scalps.....	.....	4 00	4 00
Jackson Statue Pedestal.....	.....	2000 00	2000 00
Total.....	\$837108 79	\$927963 59	\$1765072 38

**D—STATEMENT of Aggregate Amount of Warrants issued from
December 20, 1882, to December 19, 1884.**

Issued from December 20, 1882, to January 1, 1883.....	\$14,747 89	
Issued in January, 1883.....	149,173 25	
" February, "	40,899 11	
" March, "	37,998 96	
" April, "	138,242 36	
" May, "	31,114 61	
" June, "	76,666 64	
" July, "	130,206 01	
" August, "	51,203 06	
" September, "	54,551 43	
" October, "	30,753 76	
" November, "	33,743 84	
Issued from December 1, 1883, to December 19, 1883.....	45,101 53	
Amount issued one year to December 19, 1883.....		\$834,402 89
Issued from December 19, 1883, to January 1, 1884.....	\$16,915 59	
Issued in January, 1884.....	171,151 44	
" February, "	42,061 28	
" March, "	46,277 07	
" April, "	60,289 56	
" May, "	45,716 27	
" June, "	56,789 33	
" July, "	220,001 85	
" August, "	44,040 58	
" September, "	67,207 31	
" October, "	62,781 75	
" November, "	44,005 32	
Issued from Dec. 1, 1884, to Dec. 19, 1884, (inclusive)....	54,567 41	
Amount issued one year to and including Decem- ber 19, 1884.....		931,804 76
Total amount issued two years to Dec. 19, 1884.....		\$1,766,207 15

STATEMENT WARRANTS OUTSTANDING.

Amount Warrants outstanding Dec. 19, 1882.....	\$114,830 06	
Amount Warrants issued from Dec. 19, 1882, to Dec. 19, 1884, inclusive.....	1,766,207 15	
Total		\$1,881,037 21
Amount Warrants paid (disbursements) from Dec. 19, 1882, to Dec. 19, 1884, inclusive.....		1,765,072 38
Balance Warrants outstanding Dec. 19, 1884.....		\$115,964 83

**E—STATEMENT of Warrants Issued, and on what Account, from
December 20, 1882, to December 19, 1884, inclusive.**

ACCOUNTS.	Amount Issued from Dec. 20, '82 to Dec. 19, 1883, inclusive.	Amount Issued from Dec. 20, '83 to Dec. 19, 1884, inclusive.	Total.
State Prosecutions.....	\$184,234 04	\$194,907 64	\$379,141 68
Interest State Debt.....	58,016 42	193,553 50	251,569 92
Interest School Fund.....	143,699 29	146,878 74	290,578 03
Judicial Salaries.....	96,278 53	97,970 61	194,249 14
Executive Salaries.....	11,157 23	10,791 70	21,948 93
Attorney-General and Reporter's Salary	3,000 00	3,250 00	6,250 00
Adjutant General's Salary.....	1,243 33	1,200 00	2,443 33
Officers Penitentiary, Salary.....	5,049 85	4,899 84	9,949 69
Court of Referees, Salary.....	14,958 33	23,900 00	38,858 33
Supt. Hospital for Insane, Salary.....	2,000 00	2,000 00	4,000 00
Railroad Commissioners' Salary.....	3,499 86	1,999 92	5,499 78
Librarian's Salary.....	1,333 30	999 96	2,333 26
Assistant Librarian's Salary.....	541 59	458 26	999 85
Superintendent Capitol, Salary.....	450 00	350 00	800 00
Supt. Public Instruction, Salary.....	2,177 83	1,995 00	4,172 83
Clerk Hire, Comptroller's Office.....	2,498 29	2,291 63	4,789 92
“ “ Secretary State's Office.....	975 00	825 00	1,800 00
“ “ Treasurer's Office.....	973 61	916 63	1,890 24
“ “ Supt. Pub. Instruct'n's Office	499 92	499 92	999 84
Executive Expense.....	2,517 25	1,402 55	3,919 80
Supreme Court Expense.....	6,807 22	7,979 75	14,786 97
Library Expense.....	157 50	342 23	499 73
Public Arms Expense.....	35 15	35 40	70 55
Capitol Expense.....	4,778 96	4,039 07	8,818 03
Funding Expense.....	5,713 11	5,745 53	11,458 64
Common Schools, Expense.....	5,619 35	2,831 52	8,350 87
Court of Referees, Expense.....	1,878 27	2,800 25	4,678 52
Railroad Commissioners, Expense.....	229 17	227 03	456 20
Legislative Expense.....	51,871 96	.....	51,871 96
Legislative Expense—miscellaneous.....	5,517 13	.....	5,517 13
Legislative Expense—mis., 2d ex. sess'n	100 00	.....	100 00
Bank of Tennessee, New Issue Expense.	936 50	2,693 24	3,629 74
Arresting Fugitives.....	11,856 66	2,081 29	13,937 95
Hospital for Insane, Middle Tennessee..	87,598 08	52,750 00	140,348 08
Hospital for Insane, East Tennessee.....	5,941 50	63,989 79	69,931 29
School for the Blind.....	16,950 00	20,000 00	36,950 00
School for the Deaf and Dumb.....	28,800 00	22,500 00	51,300 00
State Normal College.....	4,750 00	10,691 66	15,441 66
Tax Aggregate.....	1,087 50	1,095 75	2,183 25
Supreme Court Reports.....	2,396 29	2,443 22	4,839 51
Publishing Governor's Proclamation....	4 00	307 55	311 55
Public Printing.....	15,130 01	2,036 55	17,166 56
Land Sales.....	101 00	10,929 00	11,030 00
Bureau of Agriculture, Stat. and Mines	20,000 00	11,000 00	31,000 00
Railroad Assessment.....	4,001 80	2,189 30	6,191 10
Refunded Revenue.....	1,155 87	3,468 91	4,624 78
State Board of Health.....	3,256 05	2,571 28	5,827 33
Lunatics to Asylum.....	858 06	951 04	1,709 10

E—STATEMENT of Warrants Issued—Continued.

ACCOUNTS.	Amount Issued from Dec. 20, '82, to Dec. 19, 1883, inclusive.	Amount Issued from Dec. 20, '03 to Dec. 19, 1884, inclusive.	Total.
Pension to Blind	670 00	860 00	1,530 00
Removal Penitentiary.....	663 45	.....	663 45
Express Charges.....	54 15	273 00	327 15
Publishing Acts.....	543 50	.....	543 50
Enumeration of Voters.....	84 38	.....	84 38
S. T. Hunt Fund.....	888 32	.....	888 32
State Penitent'y Building and Repairs...	3,125 78	1,251 42	4,377 20
Fees Secretary of State.....	1,108 50	.....	1,108 50
Bank of Tennessee, New Issue cancelled	4,554 50	.....	4,554 50
Bank of Tennessee, Old Issue cancelled.	166 00	.....	166 00
Treasury Warrants cancelled.....	9 00	.....	9 00
Jackson Statue Pedestal.....	.....	2,000 00	2,000 00
Presidential Electors.....	.....	730 08	730 08
Total	\$834,402 39	\$931,804 76	\$1,766,207 15

F-TABULAR STATEMENT showing the amount of appropriations for two years to March 19, 1885; amount drawn to December 19, 1884, and the amount remaining undrawn this date.

ACCOUNTS.	Amount undrawn Dec. 20, 1882.	Amount appropriated.	Total.	Amount drawn to Dec. 19, 1884.	Amount Undrawn.
State Prosecutions.....	\$47,255 08	\$305,000 00	\$352,255 08	\$379,141 68	.....
*Interest State Debt (appropriated by Act)	.....	251,569 92	251,569 92	251,569 92	.....
Interest School Fund.....	9,291 54	301,500 00	310,791 54	290,578 03	20,213 51
Judicial Salaries.....	32,886 63	201,200 00	234,086 63	194,249 14	39,837 49
Executive Salaries.....	3,920 24	22,500 00	26,420 24	21,948 93	4,471 31
Attorney General and Reporter's Salary.....	1,000 00	6,000 00	7,000 00	6,250 00	750 00
Adjutant General's Salary.....	286 67	2,400 00	2,686 67	2,443 33	243 34
Officers Penitentiary, Salaries.....	1,317 24	9,800 00	11,117 24	9,949 69	1,167 55
*Court of Refuges, Salary (appropriated by Act).....	.....	38,858 33	38,858 33	38,858 33	.....
Superintendent Hospital for Insane, Salary.....	411 67	4,000 00	4,411 67	4,000 00	411 67
Railroad Commissioners' Salaries.....	.....	12,000 00	12,000 00	5,499 78	6,500 22
Librarian's Salary.....	588 56	2,000 00	2,588 56	2,338 26	250 30
Assistant Librarian's Salary.....	.....	1,000 00	1,000 00	999 85	15
Superintendent Capitol's Salary.....	230 00	1,200 00	1,430 00	800 00	630 00
*Superintendent Public Instruction's Salary (appropriated by Act)	.....	4,172 83	4,172 83	4,172 83	.....
Clerk Hire, Comptroller's Office.....	500 00	5,000 00	5,500 00	4,789 92	710 08
Clerk Hire, Secretary of State's Office.....	225 00	1,800 00	2,025 00	1,800 00	225 00
Clerk Hire, Treasurer's Office.....	187 50	2,000 00	2,187 50	1,890 24	297 26
Clerk Hire, Superintendent of Public Instruction's Office.....	.....	1,000 00	1,000 00	999 84	16
Executive Expense.....	147 75	3,000 00	3,147 75	3,919 80	.....
Supreme Court Expense.....	.....	8,000 00	8,000 00	14,786 97	.....
Library Expense.....	.....	500 00	500 00	499 73	27
Public Arms Expense.....	40 35	100 00	140 35	70 55	69 80
Capitol Expense.....	964 96	6,052 30	7,017 26	8,818 03	.....
*Funding Expense (appropriated by Act).....	.....	11,458 64	11,458 64	11,458 64	.....
*Common Schools Expense (appropriated by Act).....	.....	8,350 87	8,350 87	8,350 87	.....
*Court of Refuges Expense (appropriated by Act).....	.....	4,678 52	4,678 52	4,678 52	.....

F—TABULAR STATEMENT showing the amount of appropriations for two years to March 19, 1885; amount drawn to December 19, 1884, and the amount remaining undrawn this date.

ACCOUNTS.	Amount undrawn Dec. 20, 1882.	Amount appropriated.	Total.	Amount	
				drawn to Dec. 19, 1884.	Amount Undrawn.
Railroad Commissioners Expense.....	.....	1,000 00	1,000 00	456 20	543 80
Legislative Expense.....	.....	51,871 96	51,871 96	51,871 96	.....
Legislative Expense, Miscellaneous.....	.....	10,796 33	10,796 33	5,517 13	5,279 20
* Legislative Expense, Miscellaneous, 2d Ex. Sess'n (appro. by Act).....	.....	100 00	100 00	100 00	.....
* Bank of Tennessee New Issue Expense (appropriated by Act).....	.....	3,629 74	3,629 74	3,629 74	.....
Arresting Fugitives.....	1,599 87	12,000 00	13,599 87	13,937 95	.....
Hospital for Insane, Middle Tennessee.....	.....	154,598 08	154,598 08	140,348 08	14,250 00
Hospital for Insane, East Tennessee.....	.....	80,000 00	80,000 00	69,931 29	10,068 71
School for the Blind.....	26,500 00	16,000 00	42,500 00	36,950 00	5,550 00
School for the Deaf and Dumb.....	12,400 00	47,500 00	59,900 00	51,300 00	8,600 00
State Normal College.....	2,600 00	28,600 00	29,200 00	15,441 66	13,758 34
Tax Aggregate.....	335 50	2,400 00	2,735 50	2,183 25	552 25
Supreme Court Reports.....	225 23	6,000 00	6,225 23	4,839 51	1,385 72
Publishing Governor's Proclamation.....	536 65	500 00	1,036 65	311 55	775 10
Public Printing.....	856 73	8,000 00	8,856 73	17,166 56	.....
Land Sales.....	18,379 50	2,500 00	20,879 50	11,030 00	9,849 50
Bureau of Agriculture, Statistics and Mines.....	8,999 22	22,000 00	30,999 22	31,000 00	.....
* Railroad Assessment (appropriated by Act).....	.....	6,191 10	6,191 10	6,191 10	.....
* Refunded Revenue (appropriated by Act).....	.....	4,624 78	4,624 78	4,624 78	.....
State Board of Health.....	1,861 50	6,000 00	7,861 50	5,827 33	2,034 17
Lunatics to Asylum.....	795 44	500 00	1,295 44	1,709 10	.....
* Pension to Blind (appropriated by Act).....	.....	1,530 00	1,530 00	1,530 00	.....
Tennessee Money Cancelled, Old Issue.....	.....	.....	.....	166 00	.....
Treasury Warrants Cancelled.....	.....	.....	.....	9 00	.....
Removal Penitentiary.....	.....	219 15	219 15	663 45	.....
Express Charges.....	1,900 75	1,500 00	8,400 75	327 15	3,073 60
Publishing Acts.....	223 95	500 00	723 95	543 50	180 45

Enumeration of Voters.....	239 62	888 32	239 62	84 38	155 24
*S. T. Hunt Fund (appropriated by Act).....	.....	.....	888 32	888 32	.....
State Penitentiary Building, Repairs, etc.....	.....	.....	.....	4,377 20	.....
Fees Secretary State.....	.....	1,108 50	1,108 50	1,108 50	.....
Bank of Tennessee New Issue Cancelled.....	.....	.....	.....	4,554 50	.....
Jackson Statue, Pedestal.....	.....	2,000 00	2,000 00	2,000 00	.....
*Presidential Electors (appropriated by Act).....	.....	730 08	730 08	730 08	.....
Total.....	\$176,752 15	\$1,684,899 45	\$1,861,651 60	\$1,786,207 15	\$151,834 19

*The amounts expended on these accounts were appropriated by Acts of the Legislature.

G 1—STATEMENT of Taxable Property in East Tennessee for 1883. (Compared with 1882.)

Counties.	No. of Acres.	Value.	Value per Acre.	Value of Town Lots.	Value of other Taxables.	Total Valuation 1883.	Total Valuation 1882.	Increase Valuat'n	Decrease Valuat'n	State Tax 1883.	State Tax 1882.	Increase Tax.	Decrease Tax.
Anderson.....	200078	\$954478	\$4 78		\$460312	\$1414790	\$1420626		\$15836	\$4244 37	\$2861 25	\$1383 12	
Bledsoe.....	254532	557220	2 18	\$16150	50176	623346	637398		14052	1870 03	1274 79	585 24	
Blount.....	372775	1451182	3 89	102735	120118	1674035	1683654		11919	5022 10	3371 91	1650 19	
Bradley.....	202444	1207181	5 96	326554	403743	1934978	2268623		431645	5810 93	4757 25	1073 68	
Campbell.....	266913	731930	2 74	43980	128120	901730	829845	\$71885		2705 19	1659 69	1045 50	
Carter.....	256604	881116	3 43	32510	40219	933945	847054	106891		2861 83	1694 11	1167 72	
Clatsome.....	210811	885214	4 21	23897	45327	960738	953064	7674		2882 21	1906 12	976 09	
Cooke.....	115140	47810	5 09	41810	151690	1330940	1353545		22645	3992 70	2707 09	1285 61	
Grainger.....	122094	1151758	9 41	11800	102755	1261710	1282610		209	3785 13	5150 58	1219 91	
Greene.....	383357	2210718	5 71	152720	156581	2526579	2572292		48913	7579 13	5150 58	2428 55	
Hamilton.....	103442	2329335	9 17	281310	235580	1487445	1425555	61880		4492 33	2851 11	1611 22	
Hancock.....	232950	2379843	10 17	3404684	1034142	6837769	5945719	892050		20513 30	11891 43	8621 87	
Hawkins.....	110970	1750430	4 46	7590	22320	5 4940	522870	2070		1574 82	1045 74	529 08	
James.....	290839	150740	6 12	87300	65660	1933406	194487	28919		5800 21	3808 97	1991 24	
Jefferson.....	182889	162812	9 00	127059	11473	2012495	1958325	54170		1672 05	1096 08	575 97	
Johnson.....	181134	448727	2 47	13730	217163	2012495	1958325	8879		6037 48	3916 65	2120 83	
Knox.....	304451	3592337	11 80	396386	21626	484053	475174		329345	1452 15	950 34	501 81	
Landon.....	139932	1082575	7 69	396386	938922	8491352	8822497		25479 45	1764 99	7834 46		
McMinn.....	271833	1509445	5 50	187495	1372 4	1263256	1201990	705 72	25934	3849 76	2618 38	1231 38	
Marion.....	290612	978333	3 37	76456	204686	1124590	1769450		644560	3374 67	3538 90		
Meigs.....	124594	1639370	6 92	13115	68901	912809	936185		17370	5789 61	3894 48	1895 13	
Monroe.....	473249	862490	3 15	13795	13735	1929870	1947240	45080		1810 44	1116 80	693 64	
Morgan.....	312302	513345	1 64	23465	31875	603480	568400	365		2437 46	1624 26	813 20	
Polk.....	747594	261594	2 61	22465	812488	812133	811130	119658		3300 56	1962 26	1338 30	
Rhea.....	200776	1002260	4 98	54544	210438	1124590	1769450		6428 39	4099 21	2329 18		
Roane.....	226073	2656772	9 09	86027	141473	2049607	2049607	38790		6428 39	4099 21	2329 18	
Scott.....	445904	1269337	2 82	7170	53043	141473	141473	1272 51	130489	4244 32	2804 79	1439 53	
Sevier.....	449207	1269337	2 82	21945	129983	141473	1402598	12377		825 60	531 46	294 14	
Squatchie.....	170333	256693	1 52	8745	9763	2657300	2657300	9470		6277 97	4025 04	2252 93	
Sullivan.....	289967	1507904	5 25	396151	186602	2060557	2013524	80133		566 68	373 79	192 89	
Tenn.....	178103	178114	10 780	10780	186602	2060557	2013524	80133		2136 29	1489 89	646 40	
Union.....	121623	664580	5 46	13100	34417	719097	744947	1996	32850	2136 29	1489 89	646 40	
Washington.....	239404	1383260	5 77	209255	103225	1685740	1658685	37055		5087 22	3317 37	1769 85	
Total.....	8286323	\$39016623	\$4 71	\$10089784	\$5514207	\$45470614	\$54627442	\$1713006	\$1769834	\$103711 71	\$109254 80	\$54621 14	\$164 23

RECAPITULATION—*East Tennessee*, 1883.

VALUATION OF PROPERTY.				TAX.			
No. Acres of Land.....	8,286,323	Value of Land.....	\$39,016,623	Decrease in Valuation.....	\$1,769,834	Increase in Taxation.....	\$54,621 14
Value of Town Lots.....		Value of Town Lots.....	10,069,784	Increase in Valuation.....	1,718,006	Decrease in Taxation.....	164 25
Value of Acres.....	\$39,016,623	Value of other Taxables ..	6,514,207	Net Decrease.....	\$56,838	Net Increase.....	\$54,456 91
Average Value per Acre....	\$4 71	Total Valuation.....	\$54,570,614				

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RECAPITULATION—Middle Tennessee, 1883.

VALUATION OF PROPERTY.			TAX.				
No. Acres of Land.....	10,207,116	Value of Land	\$ 66,990,802	Increase in Valuation.....	\$ 3,477,088	Net Increase in Taxation.....	\$110,236 41
		Value of Town Lots.....	22,783,625	Decrease in Valuation	1,006,563		
Value of Acres.....	\$66,990,802	Value of other Taxables..	16,071,094	Net Increase.....	\$2,470,525		
Average Value per Acre..	\$6 56	Total Valuation	\$105,345,421				

G 3—STATEMENT of Taxable Property in West Tennessee for 1883. (Compared with 1882.)

Counties.	No. of Acres.	Value.	V'ue per Acre.	Value of Town Lots.	Value of other Taxables.	Total Valuation 1883.	Total Valuation 1882.	Increase Valuat'n	Decrease Valuat'n	State Tax 1883.	State Tax 1882.	Increase Tax.	Decrease Tax.
Benton	25028	\$ 800915	\$3 09	\$34720	\$26745	\$862380	\$900526	.....	\$38146	\$2587 14	\$1801 05	\$786 09	.....
Carroll	953989	9224602	6 28	296401	77192	2598195	2700243	.....	102048	7794 58	5400 48	2394 10	.....
Chester	169607	726381	4 28	109212	21810	887403	778515	.....	.....	2573 20	3166 03	1015 17	.....
Crockett	160871	1342552	8 37	125540	70525	1538615	1583220	.....	44605	4615 84	3166 44	1449 40	.....
Decatur	203827	733092	3 59	26225	21643	781360	781965	.....	605	2344 03	1563 93	780 15	.....
Dyer	313575	2001548	6 38	323950	273242	2900744	2456325	.....	245930	7802 23	4910 65	2891 58	.....
Payette	431161	2282488	5 29	305460	193022	2780370	3026900	.....	.....	8342 91	6953 80	1389 11	.....
Gibson	366176	3463293	9 45	879186	164018	4506497	4519769	.....	13272	13519 49	9039 53	4479 96	.....
Hardeman	387155	1876741	4 84	439040	267087	2572878	2886606	.....	113728	17118 63	5373 21	2345 42	.....
Hardin	331529	1281813	3 86	399115	62498	1384226	1391870	.....	7644	4152 67	2783 71	1368 93	.....
Haywood	314992	1897889	6 02	488230	154493	2540412	2835325	.....	294913	7621 23	5670 65	1950 58	.....
Henderson	313616	1227810	3 91	536550	54530	1335990	1662630	.....	329640	4007 97	3325 26	682 71	.....
Henry	974877	1801810	4 80	307 330	184020	2293060	2785260	.....	492200	6879 18	5570 52	1308 66	.....
Lake	80305	629400	7 83	28210	65100	722710	751384	.....	28674	2168 13	1502 76	665 37	.....
Lauderdale	284406	1492885	5 24	143280	51532	1687697	1675524	.....	.....	5063 09	3351 04	1712 05	.....
Madison	344345	2186400	6 34	1436385	230607	3853392	4147846	.....	294454	11560 17	8295 69	3264 48	.....
McNairy	338409	1158497	3 42	81633	83289	1325469	1554485	.....	229016	3976 40	3108 97	867 43	.....
Obion	336175	2801481	8 34	459699	303200	3567080	3462296	.....	.....	10701 24	6924 59	3776 65	.....
Perry	257329	747297	2 90	13315	71744	832356	778040	.....	.....	2497 06	1556 08	940 98	.....
Shelby	462807	5068127	10 95	11300150	2988229	1906506	18007553	.....	.....	57169 51	37815 10	19354 41	.....
Tipton	259393	1906346	7 35	233197	105306	2244849	2196051	.....	.....	6734 54	4392 10	2342 44	.....
Weakley	341930	2483662	7 26	170075	125312	2779049	2846140	.....	67091	8337 14	5692 28	2644 86	.....
Total	6685002	\$40137527	\$6 00	\$17285153	\$5299158	\$62721838	\$64427473	\$593331	\$2298966	\$188165 43	\$128854 90	\$59310 53	.....

RECAPITULATION—*West Tennessee*, 1883.

VALUATION OF PROPERTY.			TAX.
No. of Acres of Land.....	6,685,002	Value of Land.....\$40,137,527	Decrease in Valuation.....\$2,298,966
Value of Acres.....	\$40,137,527 00	Value of Town Lots.....17,285,153	Increase in Valuation.....593,331
		Value of other Taxables.....5,289,153	Net Decrease.....\$1,705,635
Average Value per Acre..	\$6 00	Total Valuation.....\$62,721,838	Net Increase in Taxation.....\$59,310 63

G 4—GENERAL RECAPITULATION—1883.

ACREAGE.

No. acres land in East Tennessee.....	8,286,323	
No. acres land in Middle Tennessee.....	10,207,116	
No. acres land in West Tennessee.....	6,685,002	
	<hr/>	
Total No. acres of land in State.....		25,178,441
Average value per acre in State.....		\$5 80

VALUATION OF PROPERTY.

Value land in acres East Tennessee.....	\$39,016,623 00	
Value land in acres Middle Tennessee.....	66,990,802 00	
Value land in acres West Tennessee.....	40,137,527 00	
	<hr/>	
		\$146,144,952 00
Value of town lots in East Tennessee.....	\$10,039,784 00	
Value of town lots in Middle Tennessee.....	22,283,525 00	
Value of town lots in West Tennessee.....	17,285,153 00	
	<hr/>	
		\$ 49,608,462 00
Value of other taxables in East Tennessee.....	\$ 5,514,207 00	
Value of other taxables in Middle Tennessee.....	16,071,094 00	
Value of other taxables in West Tennessee.....	5,299,158 00	
	<hr/>	
		\$ 26,884,459 00
	<hr/>	
Total value of taxable property in State.....		\$222,637,873 00

VALUATION (Compared with 1882.)

Increase in value of property in East Tennessee.....	\$ 1,713,006 00	
Increase in value of property in Middle Tennessee....	3,477,088 00	
Increase in value of property in West Tennessee.....	593,331 00	
	<hr/>	
Total increase.....		\$ 5,783,425 00
Decrease in value of property in East Tennessee.....	\$ 1,769,834 00	
Decrease in value of property in Middle Tennessee...	1,006,565 00	
Decrease in value of property in West Tennessee.....	2,298,966 00	
	<hr/>	
Total decrease.....		\$ 5,075,365 00
	<hr/>	
Total net increase.....		\$ 708,060 00

TAX (Compared with 1882.)

Increase in taxation in East Tennessee.....	\$ 54,621 14	
Increase in taxation in Middle Tennessee.....	110,286 41	
Increase in taxation in West Tennessee.....	59,310 53	
Total increase.....		\$ 224,218 08
Decrease in taxation in East Tennessee.....	\$ 164 23	
Total decrease.....		\$ 164 23
Total net increase.....		\$ 224,053 85

NOTE.—Rate of taxation in 1882, 20 cents on the \$100.00

Rate of taxation in 1883, 30 cents on the \$100.00

H 1—STATEMENT of Taxable Property in East Tennessee for 1884. (Compared with 1883.)

Counties.	No. of Acres.	Value.	V'lue per Acre.	Value of Town Lots.	Value of other Taxables.	Total Valuation, 1884.	Total Valuation, 1883.	Increase Valuat'n	Decrease Valuat'n	State Tax, 1884.	State Tax, 1883.	Increase Tax.	Decrease Tax.
Anderson	198874	\$ 9,4757	\$ 4.85	.....	\$ 222935	\$1147782	\$1414790	\$ 53190	\$ 267008	\$ 3443.94	\$ 4244.87	\$ 169.57	\$ 801.03
Bledsoe	296558	597511	2.03	18340	60185	676536	623346	63190	.....	2029.60	1870.03	159.57	.....
Benton	371926	1504760	4.06	109430	124025	1738815	1740035	61780	.....	5207.44	5022.10	185.34	.....
Cadley	203162	139814	3.92	347923	400444	1858181	1966978	48797	48797	5664.54	5810.93	146.39	.....
Campbell	283725	824530	3.24	50085	410900	1377005	901730	455975	.....	4073.11	2705.39	1367.72	.....
Carver	211187	829322	3.94	45380	915742	915742	853845	7204	38571	2746.12	2383.83	362.29	115.71
Chalmarne	246477	1130890	4.56	23960	41032	1359955	1360738	7204	.....	2903.82	2882.21	21.61	.....
Cocke	171552	1120880	6.54	33270	180760	1359955	1359955	29010	.....	4079.73	3852.10	227.63	.....
Craig	395187	1120880	6.54	152680	130261	1282085	1251710	20635	.....	546.10	3785.13	60.97	162.79
Greene	103411	2179497	9.27	280340	106522	2472114	2353779	64285	.....	1461.43	1579.13	117.70	.....
Hamilton	217558	2417220	11.11	44182	109298	1540484	1357445	53049	.....	2621.48	4462.33	180.85	.....
Hancock	211836	114820	4.60	8141	750680	750680	653769	1018911	.....	2370.84	20513.30	3056.46	.....
Hawkins	289677	1794982	6.19	90880	57320	1466800	15610	15610	.....	1821.65	1874.82	53.17	.....
Jackson	102517	480158	4.77	20550	9363	144402	1933740	11496	.....	587.01	587.01	.....	114.84
Jefferson	182882	1715175	9.37	136660	247855	2046060	2012353	87185	38282	5557.21	1672.04	34.49	.....
Johnson	220144	437244	1.98	13150	217855	2046060	434053	17984	17984	1308.20	1452.15	261.59	53.95
Knox	305350	3654173	12.98	4588123	15575	963069	430153	114645	.....	28319.60	2349.46	3459.64	131.78
Lea	140833	1045013	7.45	74910	116404	1283939	1283935	4327	4327	3717.98	5849.76	.....	.....
Lincoln	288814	1551572	5.77	194975	199265	194975	194975	.....	.....	3537.43	5849.76	.....	.....
Marion	290111	1019246	3.40	84033	79791	1185070	1124890	60180	.....	3555.21	3734.67	180.46	.....
Meigs	120433	904313	7.12	14650	53541	979504	912809	59695	.....	5959.71	5738.42	221.29	.....
Monroe	459398	1544925	3.58	145020	196320	196320	1920870	56700	.....	2955.62	1810.41	255.18	282.70
Morgan	274288	528730	1.92	74920	84890	688540	603480	85000	94233	2154.75	2437.46	224.99	.....
Polk	281758	667344	4.37	23428	127490	1178255	812485	36525	.....	3525.55	3300.56	224.99	23.37
Rhea	226073	992770	4.92	17125	107890	1175185	1100188	74997	7790	6402.02	6428.39	228.25	.....
Roane	454253	436821	7.72	141951	245904	500254	424173	76081	18685	1500.76	1792.51	282.25	146.05
Sevier	148556	1216585	2.67	29515	119900	255274	1414775	765.82	19926	4098.97	835.60	108.33	59.78
Sewanee	291947	1487170	5.09	431958	229641	2148769	2092657	56112	.....	6446.30	6227.97	218.33	.....
Sullivan	120742	180499	1.67	13231	.....	2148769	188894	3096	.....	578.49	6227.97	11.81	.....
Union	126379	714798	5.65	13875	29649	755692	712097	43595	.....	2266.86	2136.29	130.57	.....
Washington	239494	1437935	6.00	229620	110535	1778090	1695740	82350	.....	5324.27	5087.22	247.05	.....
Total	8212388	\$39313060	\$4.79	\$12043144	\$6097545	\$57453749	\$54570614	\$3562603	\$679468	\$172861.14	\$163711.71	\$10687.82	\$2038.39

RECAPITULATION—*East Tennessee*, 1884.

VALUATION OF PROPERTY.			TAX.
No. Acres of Land.....	8,212,388	Value of Land	\$39,513,060
Value of Acres	\$39,513,060	Value of Town Lots,	12,043,144
		Value of other Taxables.....	6,097,545
Average Value per Acre..	\$4 79	Total Valuation	\$57,453,749
		Increase in Valuation	\$3,562,003
		Decrease in Valuation.....	679,468
		Net Increase.....	\$2,882,535
		Increase in Taxation.....	\$10,687 82
		Decrease in Taxation.....	2,033 39
		Net Increase.....	\$8,654 43

H 2—STATEMENT of Taxable Property in Middle Tennessee for 1884. (Compared with 1883.)

Counties.	No. of Acres.	Value.	V'lue per Acre.	Value of Town Lots.	Value of other Taxables.	Total Valuation 1884.	Total Valuation 1883.	Increase Valuat'n	Decrease Valuat'n	State Tax 1884.	State Tax 1883.	Increase Tax.	Decrease Tax.
Bedford	278653	\$3731359	\$13.67	\$490775	\$451090	\$4673224	\$4756784	22130	83560	\$14019.67	\$14270.35	66.39	\$250.68
Cannon	158653	1059780	6.67	401680	94000	1193940	1171810	22130	22130	83560	3515.43	66.39	97.06
Clay	121435	704897	5.80	18900	119791	841588	872274	30686	30686	2624.76	2616.82	97.06	97.06
Cheatham	198200	788443	3.98	37325	67701	838469	910544	21875	21875	2624.76	2731.03	65.63	65.63
Coffee	265934	375194	3.80	201300	218205	1430699	1315938	114761	114761	4392.09	3947.81	344.28	344.28
Cumberland	442597	378578	3.85	5210	2519	386307	413060	26753	26753	1158.92	1293.18	80.26	80.26
Davidson	307067	6495590	21.11	14758580	6575070	27327220	26503460	1233780	13020	83481.72	79780.38	3701.34	3701.34
Dickson	302945	857225	2.83	63565	54730	975200	988540	28330	28330	2926.56	2965.62	39.06	39.06
DeKalb	192562	1290225	6.74	142395	106840	1548460	1520130	28330	2445	4645.38	4560.39	84.99	84.99
Fentress	338835	315255	3.95	6000	15971	337226	339647	2445	2445	1011.67	1010.91	89.31	89.31
Franklin	381688	1419756	8.76	227835	88294	1735886	1706114	29772	483597	5207.65	5118.84	73.37	73.37
Giles	378764	3320746	8.76	588331	102922	4516701	4492246	2445	483597	13550.10	13476.73	73.37	73.37
Grundy	232123	510647	2.19	73372	60922	686941	1105398	35039	35039	3422.98	3311.87	105.11	105.11
Hickman	307193	994733	3.23	80899	161920	1599235	1599235	19975	19975	4857.63	4797.70	59.68	59.68
Houston	396347	1407850	3.84	46440	164920	164920	384138	78284	78284	1387.26	1152.41	234.85	234.85
Jackson	110146	393572	3.56	58200	43105	994681	987868	6793	6793	2983.98	2963.60	20.38	20.38
Lawrence	173683	908107	5.23	45051	43105	987155	925218	61937	61937	2961.46	2775.65	185.81	185.81
Lewis	138755	225437	1.62	65770	35897	261709	273756	11947	11947	785.12	821.26	36.14	36.14
Lincoln	346739	2778627	8.02	437125	376498	3592250	3725040	126790	126790	10776.75	11175.12	398.37	398.37
Macon	182270	714590	3.92	12615	781703	781703	8341732	49469	49469	2954.10	2502.51	443.59	443.59
Marshall	229473	2383385	10.39	130830	334505	2850720	2747738	102982	102982	8552.16	8243.21	308.95	308.95
Maury	375573	599275	14.18	1147475	991800	7355850	827000	22215.65	22215.65	22067.55	22067.55	248.10	248.10
Montgomery	323970	2464680	7.61	1455415	681000	4601095	4508425	92670	92670	13803.28	13525.27	278.01	278.01
Moore	71383	503030	7.04	427.5	30614	576349	587670	11231	11231	1729.31	1763.01	33.70	33.70
Overton	256500	601496	2.34	7622	22901	632019	640152	8133	8133	1896.05	1920.45	24.40	24.40
Putnam	80810	240086	2.97	6430	18644	632019	640152	8133	8133	795.45	767.64	27.81	27.81
Putnam	222062	219800	7.60	17960	101595	966330	9560730	15600	15600	2898.99	2852.19	46.80	46.80
Robertson	280115	219800	7.60	265390	478990	3030480	2856980	175600	175600	8791.44	8570.94	220.50	220.50
Rutherford	378829	4349896	11.48	841175	770669	5898140	6073775	185635	185635	17694.42	18221.32	526.90	526.90
Smith	197487	2414785	12.23	80505	393460	2888750	2800283	11533	11533	8666.25	8700.84	34.59	34.59
Stewart	265832	938565	3.53	39430	37659	1016654	1014050	2604	2604	3049.97	3042.15	7.82	7.82
Sumner	318154	2914810	9.16	434382	794447	4148639	4130728	326539	326539	12430.91	13410.83	979.92	979.92
Trousdale	70587	746839	10.58	66910	98330	913079	913079	12043	12043	2736.23	2740.14	3.91	3.91
Van Buren	120633	207263	1.72	9610	5767	222953	224676	1713	1713	667.89	704.03	36.14	36.14
Warren	233410	1134160	4.85	185389	374712	1694261	1685893	8388	8388	5082.78	5057.67	25.11	25.11
Wayne	379443	1089829	2.74	76015	98297	1214141	1190096	54045	54045	3942.42	3480.28	162.14	162.14
White	219229	981558	4.48	59820	125797	1194757	1194757	59820	59820	3767.39	3373.12	394.27	394.27
Williamson	351784	351784	11.97	47443	5431686	5431686	5131456	300236	300236	16294.05	15394.35	900.70	900.70
Wilson	354259	354259	10.06	490385	484527	4547445	4647445	99992	99992	13943.26	13942.33	299.07	299.07
Total	10306822	\$67216943	\$6.52	\$23239704	\$15914976	\$106371623	\$105345421	\$2529651	\$1502449	\$319114.74	\$316036.14	\$7585.97	\$4507.37

RECAPITULATION—Middle Tennessee, 1884.

VALUATION OF PROPERTY.

			TAX.		
No. of Acres of Land	10,306,832	Value of Land.....	\$67,316,948	Increase in Valuation.....\$2,528,651	Increase in Taxation.....\$7,586 97
Value of Town Lots.....		Value of Town Lots.....	\$3,289,704	Decrease in Valuation.....1,502,449	Decrease in Taxation.....1,507 37
Value of Acres.....	\$67,316,943	Value of other Taxables ..	15,914,976	Net Increase.....\$1,026,202	Net Increase.....\$3,078 60
Average Value per Acre...	\$6 52	Total Valuation.....	\$106,371,633		

H 3—STATEMENT of Taxable Property in West Tennessee for 1884. (Compared with 1883.)

Counties.	No. of Acres.	Value.	V'ue per Acre.	Value of Town Lots.	Value of other Taxables.	Total Valuation, 1884.	Total Valuation, 1883.	Increase Valuat'n	Decrease Valuat'n	State Tax, 1884.	State Tax, 1883.	Increase Tax.	Decrease Tax.
Benton.....	258810	\$ 829509	\$ 3.18	\$ 39308	\$ 25048	\$ 883765	\$ 862380	\$ 26385	.....	\$ 2666 29	\$ 2587 14	\$ 79 15	.....
Carroll.....	355135	2180416	6.14	308747	78582	2266745	2508195	.....	.....	7694 23	7794 58	.....	\$ 100 35
Chester.....	371349	171501	4.17	106540	31010	137515	1538482	.....	\$ 33450	2556 15	2573 20	.....	16 05
Crockett.....	161130	1334805	8.27	119130	65580	1256885	1539051	.....	19110	4558 51	4615 84	.....	57 33
Decatur.....	325526	1979857	6.06	22645	18734	739500	761360	.....	48760	2197 80	2344 88	.....	146 28
Dyer.....	437440	2170490	4.96	341840	244653	2563380	2607744	.....	38364	7387 14	7892 23	.....	115 09
Franklin.....	367468	3395384	9.24	281730	184160	2636380	2780970	.....	144590	7909 14	8342 91	.....	433 77
Gibson.....	299980	1824971	4.56	822338	164487	4382190	4506497	.....	124298	13146 59	13519 49	.....	372 90
Hartman.....	405168	1315567	4.53	42395	219562	2479168	2572878	.....	93710	7437 49	7718 63	.....	281 14
Hartman.....	290980	1824971	4.53	42395	219562	2479168	2572878	.....	93710	7437 49	7718 63	.....	281 14
Haywood.....	321480	1884503	5.88	471980	129747	2485130	2540412	30367	.....	7455 39	7621 23	.....	165 84
Henry.....	324880	1884503	5.88	471980	129747	2485130	2540412	.....	55282	7455 39	7621 23	.....	165 84
Henry.....	324880	1884503	5.88	471980	129747	2485130	2540412	.....	46938	3867 92	4007 97	.....	140 91
Lake.....	334774	1893015	4.78	54250	50938	2289440	2293060	.....	37430	6868 38	6879 18	.....	10 86
Madison.....	337746	1893015	4.78	54250	50938	2289440	2293060	.....	37430	6868 38	6879 18	.....	10 86
Madison.....	337746	1893015	4.78	54250	50938	2289440	2293060	.....	37430	6868 38	6879 18	.....	10 86
McNairy.....	337746	1893015	4.78	54250	50938	2289440	2293060	.....	37430	6868 38	6879 18	.....	10 86
McNairy.....	337746	1893015	4.78	54250	50938	2289440	2293060	.....	37430	6868 38	6879 18	.....	10 86
Obion.....	337746	1893015	4.78	54250	50938	2289440	2293060	.....	37430	6868 38	6879 18	.....	10 86
Obion.....	337746	1893015	4.78	54250	50938	2289440	2293060	.....	37430	6868 38	6879 18	.....	10 86
Percy.....	260692	764705	2.93	12850	303792	876223	853523	.....	70714	11555 65	11560 17	.....	45 48
Percy.....	260692	764705	2.93	12850	303792	876223	853523	.....	70714	11555 65	11560 17	.....	45 48
Shelby.....	454955	5050186	11.11	1304870	2074381	29179237	19055506	.....	46437	10840 56	10701 24	.....	212 14
Tipton.....	258964	1711301	6.61	218080	2029844	22479237	22479237	.....	.....	2497 06	2497 06	.....	.....
Weakley.....	344376	2441330	7.09	199865	121675	2762870	2779049	.....	224005	6082 53	6734 54	.....	672 01
Total.....	6634309	\$39332938	\$5.91	\$19067211	\$4618763	\$63018812	\$62718338	\$1294612	\$997638	\$180066 36	\$188165 43	\$3883 84	2992 91

RECAPITULATION—*West Tennessee*, 1884.

VALUATION OF PROPERTY.			TAX.
No. Acres of Land.....	6,634,309	Value of Land	\$39,332,838
Value of Acres	\$39,332,838	Value of Town Lots.....	19,067,211
Average Value per Acre.....	5 91	Value of other Taxables ..	4,618,763
		Total Valuation.....	\$63,018,812
		Net Increase.....	\$236,974
		Increase in Valuation	\$1,294,612
		Decrease in Valuation.....	997,638
		Increase in Taxation	\$3,888 84
		Decrease in Taxation.....	2,992 91
		Net Increase.....	\$890 93

H 4—GENERAL RECAPITULATION—1884.

ACREAGE.

No. of acres land in East Tennessee.....	8,212,388	
No. of acres land in Middle Tennessee.....	10,306,822	
No. of acres land in West Tennessee.....	6,634,309	
	<hr/>	
Total No. of acres land in State.....		25,153,519
Average value per acre in State.....		<hr/> \$5 79

VALUATION OF PROPERTY.

Value land in acres East Tennessee.....	\$ 39,313,060 00	
Value land in acres in Middle Tennessee.....	67,216,943 00	
Value land in acres West Tennessee.....	39,332,838 00	
	<hr/>	\$145,862,841 00
Value of town lots in East Tennessee.....	\$ 12,043,144 00	
Value of town lots in Middle Tennessee.....	23,239,704 00	
Value of town lots in West Tennessee.....	19,067,211 00	
	<hr/>	\$ 54,350,059 00
Value of other taxables in East Tennessee.....	\$ 6,097,545 00	
Value of other taxables in Middle Tennessee	15,914,976 00	
Value of other taxables in West Tennessee.....	4,618,763 00	
	<hr/>	\$ 26,631,284 00
Total value of taxable property in State.....		<hr/> \$ 226,844,184 00

VALUATION (Compared with 1883.)

Increase in value of property in East Tennessee...\$	3,562,603 00	
Increase in value of property in Middle Tennessee	2,528,651 00	
Increase in value of property in West Tennessee...	1,294,612 00	
	<hr/>	\$ 7,385,866 00
Total increase.....		
Decrease in value of property in East Tennessee...\$	679,468 00	
Decrease in value of property in Middle Tennessee	1,502,449 00	
Decrease in value of property in West Tennessee...	997,638 00	
	<hr/>	\$ 3,179,555 00
Total decrease		
Total net increase.....		<hr/> \$ 4,206,311 00

TAX (Compared with 1883.)

Increase in taxation in East Tennessee.....	\$ 1,068,782 00	
Increase in taxation in Middle Tennessee.....	758,597 00	
Increase in taxation in West Tennessee.....	888,384 00	
	<hr/>	
Total increase.....		\$ 2,215,763 00
Decrease in taxation in East Tennessee.....	\$ 203,839 00	
Decrease in taxation in Middle Tennessee.....	450,737 00	
Decrease in taxation in West Tennessee.....	299,291 00	
	<hr/>	
Total Decrease.....		\$ 953,867 00
		<hr/>
Total net increase.....		\$ 1,261,896 00

Note—Rate of taxation in 1883, 30 cents on the \$100.00.

Rate of taxation in 1884, 30 cents on the \$100 00.

I—TABULAR STATEMENT Showing the Character and Valuation of all Taxable Property in the State, the Average Value of Lands, and the State Tax Levy for a Series of Years.

YEAR.	NO. OF ACRES.	VAL. OF ACRES.	VALUE OF TOWN LOTS.	VALUE OF OTHER PROP'TY.	TOTAL VALUE.	AV. VAL. PER ACRE.	RATE OF TAXATION PER \$100.
1866.....	.....	.....	.....	.....	\$ 214,446,211	\$ 6 72	\$ 0 27½
1867.....	23,115,916	\$ 155,245,178	\$ 59,039,406	\$ 11,108,826	225,393,410	6 72	0 45
1868.....	24,701,999	179,124,054	27,394,305	10,586,208	208,054,567	6 88	0 60
1869.....	24,726,976	152,610,562	29,599,956	41,726,169	223,936,687	6 17	0 60
1870.....	.....	.....	.....	.....	252,882,874	.....	0 29
1871.....	24,466,920	205,886,777	.....	72,518,243	287,905,020	8 39	0 60
1872.....	24,722,468	185,182,379	61,444,008	26,047,965	272,674,352	7 43	0 40
1873.....	25,454,931	200,673,358	61,092,135	45,514,245	308,089,738	7 88	0 40
1874.....	25,252,393	172,748,956	43,024,281	35,393,494	289,583,565	7 09	0 40
1875.....	27,248,971	183,228,365	57,578,261	37,213,908	278,020,534	6 74	0 40
1876.....	26,100,037	182,183,996	57,186,489	28,632,500	268,002,485	6 98	0 40
1877.....	25,966,430	163,281,127	49,307,928	24,319,803	236,908,948	6 29	0 10
1878.....	25,406,022	163,678,885	48,661,930	20,871,338	223,312,153	6 05	0 10
1879.....	25,485,967	148,507,199	47,658,445	16,952,036	213,117,680	5 83	0 10
1880.....	24,827,326	148,999,550	46,635,550	16,133,338	211,768,438	6 00	0 10
1881.....	24,978,117	162,004,124	48,003,090	25,282,569	226,289,873	6 09	0 30
1882.....	25,199,578	146,657,833	48,725,735	26,546,245	221,929,313	5 82	0 20
1883.....	25,178,441	146,144,952	49,608,462	26,884,459	222,637,873	5 80	0 30
1884.....	25,163,519	145,862,841	54,350,059	26,631,284	226,844,184	5 79	0 30

EAST TENNESSEE.

K 1—TABULAR STATEMENT Showing the Average Value per Acre of Lands by Counties and Geographical Divisions, for the Years 1871 to 1884, both inclusive.

COUNTIES.	AVERAGE VALUE PER ACRE.													
	1871	1872	1873	1874	1875	1876	1877	1878	1879	1880	1881	1882	1883	1884
Anderson.....	\$4 10	\$5 05	\$5 58	\$5 66	\$5 66	\$5 60	\$4 82	\$4 30	\$4 66	\$4 60	\$4 89	\$5 15	\$4 78	\$4 65
Bledsoe.....	2 90	2 64	2 90	2 21	2 35	2 36	2 04	1 80	1 88	2 05	2 17	1 98	2 18	2 33
Blount.....	5 13	5 29	6 27	5 02	4 70	4 67	4 75	4 19	3 97	4 33	4 57	4 24	3 89	4 05
Bradley.....	8 33	8 41	8 34	7 18	6 99	7 13	6 41	6 48	5 51	7 77	6 61	6 93	5 96	5 61
Campbell.....	3 17	3 06	3 26	3 17	3 48	2 38	2 51	2 68	2 54	2 66	2 70	2 77	2 74	3 32
Carter.....	3 56	2 62	3 32	3 00	3 99	2 77	3 08	2 92	2 88	2 69	3 76	2 88	3 43	3 24
Claiborne.....	3 80	3 74	3 92	.....	4 30	3 49	3 22	4 28	3 98	4 02	3 25	4 16	4 21	4 18
Cooke.....	4 28	4 10	4 61	4 23	5 07	4 64	4 43	4 41	4 36	4 38	4 81	4 63	5 09	4 56
Grainger.....	4 45	6 36	7 18	7 13	6 87	6 84	6 57	6 05	6 02	6 44	6 42	6 39	6 91	6 64
Greene.....	6 80	6 34	8 05	6 80	6 29	6 20	6 09	5 74	5 88	5 70	5 65	5 76	5 71	5 49
Hamblen.....	10 69	10 42	11 47	10 87	9 25	9 02	9 86	9 53	9 27	9 05	8 35	8 50	9 17	9 27
Hamilton.....	9 55	10 01	12 50	.....	8 27	10 75	9 22	9 27	9 19	7 90	8 15	8 68	10 17	11 11
Hancock.....	5 05	3 53	4 22	5 84	5 17	5 17	5 04	4 97	4 80	4 65	4 59	4 63	4 46	4 60
Hawkins.....	7 30	7 08	7 02	6 75	7 60	7 46	6 94	6 50	6 22	6 26	6 22	6 21	6 12	6 19
James.....	6 55	6 45	6 17	6 13	6 63	6 62	5 91	5 17	5 08	4 99	4 99	4 88	4 95	4 77
Jefferson.....	10 56	10 31	10 98	.....	9 20	9 22	8 67	9 39	8 54	9 17	9 38	8 93	9 09	9 37

Johnson.....	1 88	1 32	2 36	2 17	1 95	1 95	1 95	1 98	1 96	1 86	2 09	2 26	2 10	2 47	1 98
Knox.....	12 65	12 81	15 00	13 62	13 18	13 14	12 18	12 10	11 93	11 93	11 53	13 67	12 93	11 80	12 98
Loudon.....	10 97	10 86	10 76	10 17	9 33	9 59	8 72	8 41	7 26	8 01	8 28	7 43	7 59	7 45	
McMinn	8 45	7 90	8 00	7 29	7 05	7 10	3 90	6 76	6 56	6 32	5 98	5 84	5 70	5 77	
Marion	3 72	3 27	4 00	3 08	3 06	3 23	9 09	2 59	2 94	2 63	3 36	2 46	3 37	3 40	
Meigs.....	7 36	7 58	8 30	7 85	8 31	7 80	7 80	7 02	6 51	6 82	7 20	6 85	6 92	7 12	
Monroe.....	3 80	3 55	4 22	4 74	4 27	4 25	3 83	4 65	3 67	3 75	4 06	3 84	3 45	3 58	
Morgan.....	0 83	0 83	0 44	0 59	0 85	0 81	0 87	1 17	1 08	1 30	1 53	1 46	1 64	1 92	
Polk	5 02	4 42	3 84	4 07	3 42	3 42	4 02	2 67	3 40	3 28	3 50	3 29	2 61	2 37	
Rhea.....	3 40	3 62	4 78	5 31	4 15	4 69	4 51	3 70	3 82	4 20	4 74	5 29	4 86	4 92	
Roane.....	8 54	6 56	8 32	.....	8 77	8 53	7 79	8 02	7 85	8 02	8 32	7 47	9 09	7 72	
Scott.....	0 64	0 63	0 60	0 70	0 72	0 76	0 71	0 64	0 84	0 92	1 16	1 40	0 79	0 96	
Sevier.....	2 44	2 34	2 50	2 30	0 79	1 68	1 57	2 76	2 67	2 40	2 96	2 80	2 82	2 67	
Sequatchie	1 75	1 87	2 26	1 90	1 49	1 58	1 46	1 33	1 39	1 31	1 56	1 48	1 52	1 62	
Sullivan.....	6 89	6 37	7 65	6 99	6 83	6 94	5 67	5 68	5 13	4 95	5 43	5 33	5 25	5 09	
*Unicoi.....	.....	.....	.....	.....	.....	1 41	1 49	1 45	1 35	1 42	1 76	1 79	0 94	1 67	
Union.....	6 33	6 26	7 45	9 91	2 05	6 06	5 82	5 64	5 46	5 47	5 88	5 57	5 46	5 65	
Washington.....	6 75	6 25	7 44	4 90	5 30	5 55	6 34	6 05	6 03	5 44	6 04	5 91	5 77	6 00	
Average value per acre, East Tenn.	\$5 46	\$5 08	\$5 39	\$4 81	\$4 30	\$4 77	\$4 58	\$4 68	\$4 55	\$4 67	\$4 87	\$4 75	\$4 71	\$4 79	

*Organized in 1875.

MIDDLE TENNESSEE.

K 2—TABULAR STATEMENT Showing the Average Value per Acre of Lands by Counties and Geographical Divisions, for the Years 1871 to 1884, both inclusive.

COUNTIES.	AVERAGE VALUE PER ACRE.													
	1871	1872	1873	1874	1875	1876	1877	1878	1879	1880	1881	1882	1883	1884
Bedford.....	18	11	18	68	18	05	17	17	15	80	15	79	15	29
Cannon.....	8	74	8	32	9	07	8	40	6	49	6	52	6	82
Clay.....	5	13	5	11	5	29	5	27	5	32	5	32	5	74
Cheatham.....	5	00	5	07	5	43	5	24	5	22	5	01	5	15
Coffee.....	6	45	5	66	6	00	5	40	4	92	4	98	4	46
Cumberland.....	0	76	0	78	0	68	0	68	0	66	0	75	0	71
Davidson.....	29	18	30	00	29	00	.....	.....	25	84	25	99	22	34
Dickson.....	3	83	2	72	3	69	3	43	3	32	3	32	3	35
DeKalb.....	5	73	5	90	7	83	7	44	7	71	7	69	7	50
Fentress.....	1	11	1	00	1	10	1	09	1	05	0	95	1	03
Franklin.....	7	12	5	48	5	60	6	34	3	97	4	25	4	83
Giles.....	14	40	13	30	14	60	13	22	13	46	13	41	8	69
Grundy.....	2	33	1	94	2	32	1	74	2	03	1	92	1	49
Humphreys.....	4	17	3	58	3	80	4	24	3	71	3	79	3	77
Hickman.....	2	68	3	40	4	07	3	98	3	82	3	62	3	91

Houston.....	1 92	2 07	2 55	2 70	3 01	2 92	2 51	2 80	2 95	2 75	2 66	2 89	3 02	3 59
Jackson.....	5 00	5 07	5 52	5 30	6 22	6 21	4 67	4 31	4 48	4 68	5 75	5 07	5 10	5 23
Lawrence.....	2 39	2 40	2 88	2 76	2 99	2 99	2 62	2 45	2 41	2 41	2 29	2 29	2 31	2 36
Lewis.....	1 53	1 53	1 81	1 82	1 51	1 53	1 30	0 90	1 34	1 36	1 64	1 17	1 80	1 62
Lincoln.....	10 96	10 99	12 89	10 43	9 50	9 50	9 38	8 61	8 07	8 14	8 42	7 98	8 20	8 02
Macon.....	3 91	3 83	4 70	4 51	4 48	4 55	4 62	4 24	4 16	4 03	4 11	4 09	4 03	3 92
Marshall.....	18 28	17 30	16 56	13 78	14 30	13 98	13 11	12 24	11 53	11 43	11 45	10 54	10 47	10 39
Maury.....	20 32	20 41	21 66	20 17	16 66	16 90	15 32	14 52	14 61	14 94	15 49	15 13	14 05	14 18
Montgomery.....	8 48	8 29	10 68	9 01	10 45	10 02	12 10	8 89	7 71	7 30	7 09	6 80	7 37	7 61
Moore.....	.....	8 67	10 03	8 78	7 99	7 97	7 16	7 20	6 75	7 08	7 54	7 13	7 10	7 04
Overton.....	2 99	3 02	3 05	2 73	2 57	2 61	2 61	2 53	2 40	2 37	2 65	2 45	2 32	2 34
Pickett (org. 1881)	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2 97
Putnam.....	3 29	3 36	3 64	3 61	4 17	4 12	3 98	3 36	3 40	3 81	3 65	3 76	3 80	3 81
Robertson.....	12 85	9 99	11 99	11 09	9 35	9 36	8 57	8 42	8 27	8 24	8 21	7 71	7 67	7 60
Rutherford.....	15 95	15 42	18 15	16 19	15 47	13 37	14 27	13 80	13 15	12 94	13 03	11 60	11 84	11 43
Smith.....	11 23	11 38	12 25	11 59	13 47	13 46	12 82	12 90	12 39	12 36	12 56	12 40	12 35	12 23
Stewart.....	4 21	3 86	4 69	4 23	4 72	4 75	4 22	4 44	3 72	3 71	3 67	3 42	3 19	3 53
Sumner.....	13 72	12 58	11 98	10 82	11 93	11 28	8 75	9 51	8 60	8 87	9 57	8 79	9 58	9 16
Trousdale.....	12 15	13 52	13 27	11 55	11 59	11 35	11 55	10 31	10 49	10 67	11 27	11 29	10 91	10 58
Van Buren.....	1 29	1 34	1 58	1 50	1 72	1 61	1 76	1 04	1 61	2 06	1 80	1 84	1 85	1 72
Warren.....	6 95	7 22	7 29	6 73	6 50	6 45	5 92	5 54	5 48	7 03	5 04	4 51	4 65	4 85
Wayne.....	2 91	2 86	2 94	3 11	3 17	3 12	2 70	2 52	2 56	2 39	2 63	2 32	2 95	2 74
White.....	3 85	4 00	5 25	4 63	4 22	4 32	4 25	3 81	4 19	3 94	3 79	4 12	4 50	4 48
Williamson.....	18 25	14 04	16 26	15 71	16 08	16 09	13 12	12 37	11 88	11 83	11 75	11 15	11 14	11 97
Wilson.....	14 32	14 44	14 49	13 03	12 58	12 41	11 74	11 53	10 67	10 64	11 00	10 18	10 23	10 06
Average value per acre, Mid. Tenn.	\$10.25	\$8 29	\$8 64	\$7 56	\$7 76	\$7 84	\$7 18	\$6 66	\$6 59	\$6 71	\$6 77	\$6 43	\$6 56	\$6 52

WEST TENNESSEE.

K 3—TABULAR STATEMENT Showing the Average Value per Acre of Lands by Counties and Geographical Divisions, for the Years 1871 to 1884, both inclusive.

COUNTIES.	AVERAGE VALUE PER ACRE.													
	1871	1872	1873	1874	1875	1876	1877	1878	1879	1880	1881	1882	1883	1884
Benton.....	\$3 29	\$3 64	\$3 80	\$2 96	\$3 66	\$3 57	\$3 41	\$3 35	\$3 24	\$3 22	\$3 35	\$3 33	\$3 09	\$3 18
Carroll.....	8 95	8 47	8 97	8 73	8 47	8 41	7 55	6 91	4 06	6 88	6 62	6 29	6 28	6 14
*Chester.....	.....	14 56	16 26	15 36	12 15	11 81	.....	.....	.....	.....	.....	4 18	4 28	4 17
Crockett.....	.....	4 34	4 47	4 34	4 76	4 68	4 10	3 80	3 81	3 68	3 48	3 66	3 59	3 65
Decatur.....	3 85	4 34	4 47	4 34	4 76	4 68	4 10	3 80	3 81	3 68	3 48	3 66	3 59	3 65
Dyer.....	8 29	8 13	9 80	9 01	8 49	8 03	6 73	6 92	6 00	6 42	6 49	6 22	6 38	6 06
Fayette.....	9 50	9 43	11 21	10 10	40 10	30 30	8 17	6 85	6 19	6 59	6 43	5 66	5 29	4 96
Gibson.....	13 32	12 53	15 00	13 74	12 84	12 79	10 71	10 32	10 06	10 20	10 16	9 71	9 45	9 24
Hardeman.....	6 47	6 39	8 37	7 14	6 96	7 03	5 81	5 54	5 48	5 29	5 23	5 10	4 84	4 50
Hardin.....	4 58	4 37	5 06	5 05	5 37	5 31	4 41	4 37	4 26	4 07	4 04	4 04	3 86	4 53
Haywood.....	16 31	10 85	12 50	11 67	9 35	9 37	7 78	7 03	6 73	6 63	6 81	6 52	6 02	5 88
Henderson.....	4 43	4 41	5 23	5 24	5 57	5 43	4 88	4 52	4 39	4 38	4 26	4 06	3 91	3 78
Henry.....	6 88	6 93	7 83	6 95	6 35	6 25	5 63	5 44	5 10	5 31	5 22	6 03	4 80	4 94
Lake.....	9 14	8 07	8 96	8 56	10 21	10 64	8 05	8 16	7 57	7 47	9 40	8 96	7 83	7 19
Lauderdale.....	7 69	7 98	9 22	8 12	7 43	7 51	5 46	5 20	5 05	5 06	5 37	5 15	5 24	5 07
Madison.....	9 12	8 94	10 67	10 26	10 05	8 95	7 85	6 38	6 98	7 20	6 96	6 54	6 34	6 44

McNairy.....	3 55	3 67	4 36	3 47	5 00	5 01	4 30	3 94	3 69	3 73	3 78	3 41	3 42	3 29
Obion.....	10 53	10 83	12 25	10 77	8 70	8 71	8 39	8 58	8 49	8 48	8 61	8 49	8 34	8 51
Perry.....	4 09	4 42	4 58	3 88	3 43	3 43	2 99	2 88	2 98	3 02	3 12	3 55	2 90	2 93
Shelby.....	26 83	25 00	21 57	20 61	17 94	18 27	14 31	13 32	12 60	12 22	11 78	11 46	10 95	11 11
Tipton.....	10 47	10 39	10 20	10 28	9 61	9 60	7 79	7 29	7 18	7 58	7 74	6 08	7 35	6 61
Weakley.....	10 21	9 68	10 82	10 08	11 43	11 37	8 81	8 00	7 81	8 18	8 01	7 36	7 26	7 09
Average value per acre, W. Tenn....	\$9 05	\$8 98	\$9 84	\$8 94	\$8 66	\$8 51	\$7 13	\$6 77	\$6 22	\$6 52	\$6 50	\$6 16	\$6 00	\$5 91
Average value per acre in State.....	\$8 39	\$7 43	\$7 88	\$7 09	\$6 74	\$8 98	\$6 29	\$6 05	\$5 83	\$6 00	\$6 08	\$5 82	\$5 80	\$5 79

*Organized in 1882.

L 1—TABULAR STATEMENT Showing the length of the several Railroads in the State of Tennessee; also the assessed value per mile; the aggregate assessed valuation of each road, and the aggregate value of all the railroads in the State; compiled from the returns of the Railroad Assessors, September 19, 1883.

NAMES OF RAILROADS.	No. Miles.	Assessed Value per Mile.	Aggregate Assessed Value.
Alabama Great Southern.....	4.85	\$13916 86½	\$67496 80
Cincinnati, New Orleans & Texas Pacific.....	136.89	24763 42½	3389865 56
Coal Creek Coal Company's Railroad.....	1.75	3428 57	6000 00
Coal Creek & New River.....	3.00	4666 66½	14000 00
†Chesapeake, Ohio & Southwestern.....	120.00	11491 66½	1379000 00
Duck River Valley (leased by Nashville, Chattanooga & St. Louis Railway Co.).....	48.00	2796 35	134225 00
Dayton Coal & Iron Company's Railroad.....	3.50	8585 71	30050 00
†East Tennessee, Virginia & Georgia— (Main Stem).....	242.00	20000 86½	4840210 00
†East Tennessee, Virginia & Georgia— (Alabama Division).....	12.40	16000 00	198400 00
†East Tennessee, Virginia & Georgia— (Ooltewah Division).....	8.40	15000 00	126000 00
†East Tennessee, Virginia & Georgia— (North Carolina Division).....	43.50	11500 00	5(0250 00
East Tennessee & Western North Carolina— (Narrow Gauge).....	31 00	6245 74	193618 00
Glen Mary Coal Company's Railroad— (Narrow Gauge).....	.75	4666 66½	3500 00
Helenwood Coal Company's Railroad.....	.50	4000 00	2000 00
Illinois Central (Formerly Chicago, St. Louis & New Orleans).....	116.42	20260 41½	2358717 87
Jellico Mountain Coal & Coke Company's Railroad.....	2.00	4000 00	8000 00
†Knoxville & Augusta.....	16.00	6184 37½	98950 00
*Knoxville & Ohio.....	39.25	11009 80	432135 00
†Louisville & Nashville (Main Stem).....	45.35	34927 29½	1583952 82
†Louisville & Nashville (Decatur Division).....	93.51	19002 59½	1776932 42
†Louisville & Nashville (Henderson Div.).....	37.09	13750 02	509988 24
†Louisville & Nashville (Memphis Division).....	212.02	14000 00	2968280 00
†Memphis & Charleston.....	85.75	15051 38½	1290656 53½
†Memphis & Charleston (Somerville Br'ch).....	14.00	7000 00	98000 00
Memphis & Little Rock.....	.75	6666 66½	5000 00
*Mobile & Ohio.....	119.88	17552 93	2090343 31
Mississippi & Tennessee.....	11½½	16308 33	189176 66
Nashville & Florence.....	16.00	7734 37½	123750 00
Nashville, Chattanooga & St. Louis— (Main Stem).....	124.50	20491 96	2551249 02
Nashville, Chattanooga & St. Louis— (Fayetteville Division).....	40.00	\$7000 00	\$220000 00

*Exempt from taxation.

†Appealed, as to their assessment, and action of assessors overruled by Supreme Court.

‡Appealed, as to their assessment, but action of assessors sustained by Supreme Court.

L 1—TABULAR STATEMENT *Continued, Showing the Length of the Several Railroads in the State of Tennessee, etc.*

NAMES OF RAILROADS.	No. Miles.	Assessed Value per Mile.	Aggregate Assessed Value.
Nashville, Chattanooga & St. Louis— (Jasper Division).....	21.50	7000 00	150500 00
Nashville, Chattanooga & St. Louis— (Lebanon Division).....	30.00	15200 00	456000 00
Nashville, Chattanooga & St. Louis— (McMinnville Division).....	48.00	7000 00	336000 00
Nashville, Chattanooga & St. Louis— (Nashville & Tuscaloosa Division, N. G.)..	34.00	2542 35	86440 00
*Nashville, Chattanooga & St. Louis— (Northwestern Division).....	163.00	13000 00	2119000 00
Nashville, Chattanooga & St. Louis— (Shelbyville Division).....	8.00	7000 00	56000 00
Nickajack.....	1.25	7200 00	9000 00
Roane Iron Co.'s Railroad.....	2.75	5462 18½	15021 00
Roane Iron Co.'s Railroad— (Broad and Narrow Gauge).....	5.25	4854 47½	25486 50
†Rogersville & Jefferson.....	15.70	5210 70	81808 00
Ship Island, Ripley & Kentucky.....	5.00	4209 00	21045 00
Soddy Coal Co.'s Railroad— (Broad and Narrow Gauge).....	3.75	5060 00	18975 00
Tennessee Coal, Iron and R. R. Co.'s R. R....	20.00	13368 50	267370 00
Tennessee & Sequatchie Valley— (Narrow Gauge).....	10.60	5283 02	56000 00
Walden's Ridge (formerly Cumberland Mountain Narrow Gauge).....	17.60	5134 94	90375 00
Western & Atlantic.....	15.44	32935 97	508531 50
Total.....	2032½½½	.....	\$31547299 23½

Average value per mile..... \$15,521 42

Increase of mileage over last report..... 9½½½ miles.

Increase of value over last report\$4,531,199 11

*Exempt from Taxation.

†Appealed as to their assessment, and action of assessors overruled by Supreme Court.

L 2—TABULAR STATEMENT showing the length of the several Railroads in the State of Tennessee; also the Assessed value per mile; the aggregate assessed valuation of each road, and the aggregate value of all the Railroads in the State, compiled from the returns of the Railroad Assessors, July 17, 1884.

NAMES OF RAILROADS.	No. Miles.	Assessed Value per Mile.	Aggregate Assessed Value.
Alabama Great Southern.....	4.85	\$13916 86½	\$67496 80
Cincinnati, New Orleans & Texas Pacific.....	136.89	24763 42½	3389865 56
Coal Creek Coal Company's Railroad.....	1.75	3428 57	6000 00
Coal Creek & New River	3.00	4666 66½	14000 00
†Chesapeake, Ohio & Southwestern.....	120.00	11391 66½	1367000 00
Duck River Valley, (leased by Nashville— Chattanooga & St. Louis Railway Company)	48.00	2796 35	134225 00
Dayton Coal & Iron Company's Railroad.....	3.50	8585 71	30050 00
†East Tenn., Virginia & Georgia (Main Stem).	254.40	24000 00	6105600 00
†East Tennessee, Virginia & Georgia— (Ooltewah Division).....	8.40	16000 00	134400 00
†East Tennessee, Virginia & Georgia— (North Carolina Division).....	43.50	10000 00	435000 00
East Tennessee & Western North Carolina— (Narrow Gauge).....	31.00	6245 74	193618 00
Glen Mary Coal Company's Railroad— (Narrow Gauge).....	.75	4666 66½	3500 00
Helenwood Coal Company's Railroad.....	.50	4000 00	2000 00
Illinois Central, (formerly Chicago, St. Louis & New Orleans).....	116.42	20260 41½	2358717 87
Jellico Mountain Coal & Coke Company's Railroad.	2.00	4000 00	8000 00
Kansas City, Springfield & Memphis.....	24½	12633 81	34131 82
Knoxville & Augusta.....	16.00	5000 00	80000 00
*Knoxville & Ohio.....	66.25	11009 80	729399 85
†Louisville & Nashville (Main Stem).....	45.35	49977 95	2266500 00
†Louisville & Nashville (Decatur Division)...	93.51	25180 34	2354613 68
Louisville & Nashville (Henderson Division)...	37.09	13750 02	509988 24
Louisville & Nashville (Memphis Division)...	212.02	14000 00	2968280 00
Memphis & Charleston.....	85 75	15061 38½	1290656 53½
Memphis & Charleston (Somerville Branch)...	14.00	7000 00	98000 00
Memphis & Little Rock.....	.75	6666 66½	5000 00
Mississippi & Tennessee.....	11½	16308 33	189176 66
*Mobile & Ohio.....	119 88	17552 93	2090343 31
Nashville & Florence.....	36.00	7734 37½	278437 50
Nashville, Chattanooga & St. Louis— (Main Stem)	124.50	20491 96	2551249 02
Nashville, Chattanooga & St. Louis— (Fayetteville Division)	40.00	7000 00	280000 00
Nashville, Chattanooga & St. Louis— (Jasper Division).....	21.50	7000 00	150500 00

* Exempt from taxation.

† Appealed as to Assessment of 1884 for Taxes of 1883 and 1884; in litigation.

L 2—TABULAR STATEMENT *Continued, Showing the Length of the several Railroads in the State of Tennessee, etc.*

NAMES OF RAILROADS.	No. Miles.	Assessed Value per Mile.	Aggregate Assessed Value.
Nashville, Chattanooga & St. Louis— (Lebanon Division).....	30.00	\$15200 00	\$456000 00
Nashville, Chattanooga & St. Louis— (McMinnville Division).....	48.00	7000 00	336000 00
Nashville, Chattanooga & St. Louis— (Nashville & Tuscaloosa Division, Nar. G.).	34.00	2807 06	95440 00
*Nashville, Chattanooga & St. Louis— (Northwestern Division).....	163.00	13000 00	2119000 00
Nashville, Chattanooga & St. Louis— (Shelbyville Division).....	8.00	7000 00	56000 00
Nickajack	1.25	7200 00	9000 00
Roane Iron Company's Railroad.....	2.75	5462 18½	15021 00
Roane Iron Company's Railroad (Nar. G.)....	5.25	4854 57½	25486 50
Bogersville & Jefferson.....	15.40	3936 43	61802 00
Ship Island, Ripley & Kentucky	5.00	4209 00	21045 00
Soddy Coal Company's Railroad— (Broad and Narrow Gauge).....	3.75	5060 00	18975 00
Tennessee Coal, Iron & R. R. Co.'s Railroad ...	20.00	13368 50	267370 00
Tennessee & Sequatchie Valley.....	10.60	5283 02	56000 00
Tennessee Southern.....	12½ ³⁰⁰ ₂₈₀	7000 00	88375 00
Walden's Ridge (formerly Cum. Mt. Nar. G.)..	17.60	5134 94	90375 00
Western & Atlantic	15.44	32935 97	508531 50
Total.....	2094½¹¹³₁₁₃	.....	\$34350170 84

Average value per mile..... \$16,400 17
 Increase of mileage over Assessment of 1883. 62½⁴¹₃₀ miles.
 Increase of value over Assessment of 1883.....\$2,802,871 61
 Increase of mileage over last Comptroller's report..... 71½⁹⁴₁₁₀ miles.
 Increase of value over last Comptroller's report.....\$7,334,070 72

* Exempt from taxation.

M 1—TABULAR STATEMENT *showing the distribution to the several Counties throughout the State of the railroad property as assessed for the year 1883.*

NAME OF COUNTY AND ASSESSMENT OF RAILROADS THEREIN.	No. of Miles.	Assessed Value per Mile.	Assessed Valuation.	Total.
Anderson County.				
Coal Creek Coal Co.'s Railroad.....	1.75	\$3428 57	\$6000 00	
Coal Creek & New River.....	3.00	4666 66½	14000 00	
Knoxville & Ohio.....	17.00	11009 80	187166 75	\$207166 75
Bedford County.				
Nashville, Chattanooga & St. Louis, (Main Stem)	16.60	20491 96	340166 53	
Nashville, Chattanooga & St. Louis, (Shelbyville Div.)	8.00	7000 00	56000 00	396166 53
Benton County.				
Louisville & Nashville, (Memphis Div.)	10.98	14000 00	153720 00	
Nashville, Chattanooga & St. Louis, (Northwestern Div.)	13.70	13000 00	178100 00	331820 00
Blount County.				
Knoxville & Augusta	8.00	6184 37½	49475 00	49475 00
Bradley County.				
East Tenn., Va. & Ga., (Main Stem) ..	22.42	20000 86½	448419 45	
East Tenn., Va. & Ga., (Ala. Div.) ...	12.40	16000 00	198400 00	646819 45
Campbell County.				
Jellico Mountain.....	2.00	4000 00	8000 00	
Knoxville & Ohio.....	5.75	11009 80	63306 40	71306 40
Carter County.				
East Tenn., Va. & Ga., (Main Stem) ..	2.75	20000 86½	55002 45	
East Tenn. & Western North Caro- lina, (Narrow Gauge).....	29.00	6245 74	181126 50	236128 95
Carroll County.				
Louisville & Nashville, (Memphis Div.)	16.69	14000 00	233660 00	
Nashville, Chattanooga & St. Louis, Northwestern Div.).....	27.30	13000 00	354900 00	588560 00
Cheatham County.				
Nashville, Chattanooga & St. Louis, (Northwestern Div.)	9.50	13000 00	123500 00	123500 00

M 1—TABULAR STATEMENT—Continued.

NAME OF COUNTY AND ASSESSMENT OF RAILROADS THEREIN.	No. of Miles.	Assessed Value per Mile.	Assessed Valuation.	Total.
Cocke County.				
East Tenn., Va. & Ga., (North Carolina Br., formerly Cin., C. Gap & C.)	31.50	\$11500 00	\$362250 00	362250 00
Coffee County.				
Nashville, Chattanooga & St. Louis, (Main Stem)	6.75	20491 96	138320 73	
Nashville, Chattanooga & St. Louis, (McMinnville Div.)	23.00	7000 00	161000 00	299320 73
Crockett County.				
Louisville & Nashville, (Memphis Div.)	11.78	14000 00	164920 00	164920 00
Cumberland County.				
Tennessee & Sequatchie Valley, (Narrow Gauge)	2.20	5283 02	11622 92	11622 92
Davidson County.				
Louisville & Nashville (Main Stem)...	11.75	34927 29½	410395 71	
Louisville & Nash., (Henderson Div.)..	8.39	13750 02	115362 66	
Louisville & Nashville (Decatur Div.)	9.77	19002 59½	185655 32	
Nashville, Chattanooga & St. Louis, (Main Stem)	15.13	21491 96	310043 35	
Nashville, Chattanooga & St. Louis, (Northwestern Div.)	17.50	13000 00	227500 00	
Nashville, Chattanooga & St. Louis, (Lebanon Div.)	13.50	15200 00	205200 00	1454157 04
Dickson County.				
Nashville, Chattanooga & St. Louis, (Nash. & Tuscaloosa Div., Nar. G.)..	10.00	2542 35	25423 55	
Nashville, Chattanooga & St. Louis, (Northwestern Div.)	23.50	13000 00	305500 00	330923 55
Dyer County.				
Chesapeake, Ohio & Southwestern.....	23.50	11491 66½	270054 17	270054 17
Fayette County.				
Memphis & Charleston	25.40	15051 38½	382305 26	
Memphis & Charleston, (Somerville Branch)	14.00	7000 00	98000 00	
Illinois Central (formerly Chicago, St. Louis & New Orleans)	3.71	20260 41½	75166 15	
Louisville & Nashville, (Memphis Div.)	8.58	14000 00	120120 00	675591 41
Franklin County.				
Tenn. Coal & Iron Co.'s Railroad	9.00	13368 50	120316 50	
Nashville, Chattanooga & St. Louis, (Main Stem)	30.90	20491 96	633201 56	
Nashville, Chattanooga & St. Louis, (Fayetteville Branch)	21.00	7000 00	147000 00	900518 06

M 2—TABULAR STATEMENT—Continued.

NAME OF COUNTY AND ASSESSMENT OF RAILROADS THEREIN.	No. of Miles.	Assessed Value per Mile.	Assessed Valuation.	Total.
Gibson County.				
Mobile & Ohio.....	30.11	\$17551 93	\$527693 73	
Illinois Central, (formerly Chicago, St. Louis & New Orleans).....	23.87	20260 41½	479564 12	
Louisville & Nashville, (Memphis Div.)	17.17	14000 00	240380 00	\$1247637 85
Giles County.				
Louisville & Nashville, (Decat. Div.).	32.11	25180 34	808540 75	808540 75
Greene County.				
East Tenn., Va. & Ga., (Main Stem).	30.25	24000 00	726000 00	726000 00
Grundy County.				
Tennessee Coal & Iron Co.'s Railroad.	11.00	13368 50	147053 50	147053 50
Hamblen County.				
East Tenn., Va. & Ga., (Main Stem)..	20.32	24000 00	487680 00	
East Tenn., Va. & Ga., (North Caro- lina Br., formerly Cin., C. Gap & C.)	7.40	10000 00	74000 00	561680 00
Hamilton County.				
Roane Iron Co.'s Railroad, (Broad & Narrow Gauge).....	2.75	5462 18½	15021 00	
Soddy Coal Co.'s Railroad, (Broad & Narrow Gauge).....	3.75	5060 00	18975 00	
Alabama Great Southern.....	4.85	13916 86½	67496 80	
Cincinnati, New Orleans & Texas Pa- cific, (formerly Cincin. Southern)...	32.39	24763 42½	802087 41	
Western & Atlantic.....	15.44	32935 97	508531 50	
East Tenn., Va. & Ga., (Main Stem)..	11.21	24000 00	269040 00	
Nashville, Chattanooga & St. Louis, (Main Stem)	9.70	20491 96	198772 01	1879923 72
Hardeman County.				
Ship Island, Ripley & Kentucky.....	5.00	4209 00	21045 00	
Memphis & Charleston.....	23.75	15051 38½	357470 46	
Illinois Central, (formerly Chicago, St. Louis & New Orleans).....	33.94	20260 41½	687688 65	1066154 11
Hawkins County.				
Rogersville & Jefferson.....	15.40	3936 43	61802 00	
East Tenn., Va. & Ga., (Main Stem)..	2.25	24000 00	54000 00	115802 00
Haywood County.				
Louisville & Nashville, (Mem. Div.)..	23.81	14000 00	403340 00	403340 00
Henry County.				
Louisville & Nashville, (Mem. Div.)..	31.14	14000 00	435960 00	435960 00
Hickman County.				
Nashville, Chattanooga & St. Louis, (Nashv. & Tuscaloosa Div., Nar. G.)	24.00	2807 06	67369 41	67369 31

M 2—TABULAR STATEMENT—*Continued.*

NAME OF COUNTY AND ASSESSMENT OF RAILROADS THEREIN.	No. of Miles.	Assessed Value per Mile.	Assessed Valuation.	Total.
Houston County.				
Louisville & Nashville, (Memphis Div.).....	19.22	\$14000 00	\$269080 00	\$269080 00
Humphreys County.				
Nashville, Chattanooga & St. Louis, (Northwestern Div.).....	28.30	13000 00	367900 00	367900 00
James County.				
East Tenn., Va. & Ga., (Main Stem)..	6.65	24000 00	159600 00	
East Tenn., Va. & Ga., (Ooltewah Cut-off).....	8.40	16000 00	134400 00	294000 00
Jefferson County.				
East Tenn., Va. & Ga., (Main Stem)..	18.00	24000 00	432000 00	
East Tenn., Va. & Ga., (North Caro- lina Br., formerly Cin., C. Gap & C.)	4.80	10000 00	48000 00	478000 00
Knox County.				
Knoxville & Augusta.....	8.00	4000 00	40000 00	
Knoxville & Ohio.....	16.50	11009 80	181661 85	
East Tenn., Va. & Ga., (Main Stem)..	34.32	24000 00	823680 00	1045341 85
Lauderdale County.				
Chesapeake, Ohio & Southwestern.....	24.10	11391 66½	274539 16½	274539 16½
Lawrence County.				
Nashville & Florence.....	15.50	7734 37½	119882 81½	119882 81½
Lewis County.				
Nashville & Florence.....	2.50	7734 37½	19335 93½	19335 93½
Lincoln County.				
Duck River Valley.....	12.33	2796 35	34478 51	
Nashville, Chattanooga & St. Louis, (Fayetteville Branch).....	19.00	7000 00	133000 00	167478 51
Loudon County.				
East Tennessee, Virginia & Georgia, (Main Stem).....	17.10	24000 00	410400 00	410400 00
McMinn County.				
East Tennessee, Virginia & Georgia, (Main Stem).....	25.20	24000 00	604800 00	604800 00
McNairy County.				
Memphis & Charleston.....	11.50	15051 38½	173090 96	
Mobile & Ohio.....	34.10	17552 93	599221 92	772312 88
Madison County.				
Mobile & Ohio.....	33.10	17552 93	589339 62	
Illinois Central, (formerly Chicago, St. Louis & New Orleans).....	27.42	20260 41½	555540 71	1144880 33

M 2—TABULAR STATEMENT—Continued.

NAME OF COUNTY AND ASSESSMENT OF RAILROADS THEREIN.	No. of Miles.	Assessed Value per Mile.	Assessed Valuation.	Total.
Marion County.				
Nickajack.....	1.25	\$7200 00	\$19000 00	
Nashv., Chat. & St. L., (Main Stem).....	13.00	20191 96	266395 48	
Nashv., Chat. & St. L., (Jasper Div.).....	21.50	7000 00	150500 00	\$425895 48
Marshall County.				
Duck River Valley.....	24.17	2796 35	67588 00	67588 00
Maury County.				
Duck River Valley.....	11.50	2796 35	32158 49	
Nashville & Florence.....	18.00	7734 37½	139218 75	
Louisville & Nashville, (Decat. Div.).....	30.01	25180 34	755662 03	927039 27
Monroe County.				
East Tenn., Va. & Ga., (Main Stem).....	10.53	24000 00	252720 00	252720 00
Montgomery County.				
Louisville & Nashville, (Mem. Div.).....	31.68	14000 00	443520 00	
Louisville & Nashville, (Hend. Div.).....	2.82	13750 02	38775 05	482295 05
Morgan County.				
Walden's Ridge, (form'ly Cumb. Mt.).....	5.50	5134 94	28242 19	
Glen Mary.....	.75	4666 66½	3500 00	
Cincinnati, New Orleans & Texas Pacific, (formerly Cincin. Southern).....	31.00	24763 42½	767666 25	799408 44
Obion County.				
Chesapeake, Ohio & Southwestern.....	28.30	11391 66½	322384 16½	
Mobile & Ohio.....	21.75	17552 93	374085 01	
Illinois Central, (formerly Chicago, St. Louis & New Orleans).....	6.59	20260 41½	133516 15	
Nashville, Chattanooga & St. Louis, (Northwestern Div.).....	14.00	13000 00	182000 00	1011988 35½
Rhea County.				
Tenn. & Sequatchie Valley (Nar. G.).....	8.40	5283 02	44377 08	
Dayton Coal & Iron Co.'s Railroad....	3.50	8585 71	30050 00	
Cincin., New Orleans & Texas Pacific, (formerly Cincinnati Southern).....	32.00	24763 42½	792429 68	866856 76
Roane County.				
Walden's Ridge, (form'ly Cumb. Mt.).....	12.10	5134 90	62132 81	
Roane Iron Co.'s Railroad, (Broad & Narrow Gauge).....	5.25	4854 57½	25486 50	
Cincin., New Orleans & Texas Pacific, (formerly Cincinnati Southern).....	15.50	24763 42½	383833 11	471452 42
Robertson County.				
Louisville & Nashville, (Hend. Div.).....	25.41	13750 02	349388 00	349388 00
Rutherford County.				
Nashville, Chattanooga & St. Louis, (Main Stem).....	32.42	20491 96	664349 34	664349 34

M 2—TABULAR STATEMENT—Continued.

NAME OF COUNTY AND ASSESSMENT OF RAILROADS THEREIN.	No. of Miles.	Assessed Value per Mile.	Assessed Valuation.	Total.
Scott County.				
Helenwood Coal Co.'s Railroad.....	.50	\$4000 00	\$2000 00	
Cincin., New Orleans & Texas Pacific, (formerly Cincinnati Southern).....	26.00	24763 42½	643849 11	645849 11
Shelby County.				
Chesapeake, Ohio & Southwestern.....	22.70	11391 66½	258590 83½	
Memphis & Little Rock.....	.75	6666 66½	5000 00	
Memphis & Charleston.....	25.10	15051 38½	377789 85	
Mississippi & Tennessee.....	11.60	16308 33	189176 66	
Louisville & Nashville, (Mem. Div.)..	26.49	14000 00	370860 00	
Kansas City, Springfield & Memphis..	24.76½	12633 81	34131 82	
Tennessee Southern.....	12½	7000 00	88375 00	1323924 16½
Stewart County.				
Louisville & Nashville, (Mem. Div.)..	4.78	14000 00	66920 00	66920 00
Sullivan County.				
East Tenn., Va. & Ga., (Main Stem)...	18.00	24000 00	432000 00	432000 00
Sumner County.				
Louisville & Nashville, (Main Stem).	33.60	49977 95	1679259 09	
Louisville & Nashville, (Hend. Div.)..	.47	13750 02	6462 50	1685721 59
Tipton County.				
Chesapeake, Ohio & Southwestern.....	21.40	11391 66½	243781 66½	
Louisville & Nashville, (Mem. Div.)..	4.42	14000 00	61880 00	305661 66½
Warren County.				
Nashville, Chattanooga & St. Louis, (McMinnville Div.).....	25.00	7000 00	175000 00	175000 00
Washington County.				
East Tenn., Va. & Ga., (Main Stem)...	23.00	24000 00	552000 00	
East Tenn. & Western North Carolina, (Narrow Gauge).....	2.00	6245 74	12491 50	564491 50
Weakley County.				
Illinois Central, (formerly Chicago, St. Louis & New Orleans).....	21.09	20260 41½	427292 09	
Louisville & Nashville, (Mem. Div.)..	.28	14000 00	3920 00	
Nashville, Chattanooga & St. Louis, (Northwestern Div.).....	29.20	13000 00	379600 00	810812 09
Williamson County.				
Louisville & Nashville, (Decat. Div.)	21.62	25180 34	544398 97	544398 97
Wilson County.				
Nashville, Chattanooga & St. Louis, (Lebanon Div.).....	16.50	15200 00	250800 00	250800 00
Total.....				\$34350170 39

N—TABULAR STATEMENT *showing the valuation of Telegraph property in the State of Tennessee, and the distribution of the same to the several Counties as assessed for the years 1883 and 1884.*

NAME OF COMPANY.	NAME OF COUNTY.	No. of Miles.	Value per Mile.	Total value
Western Union.	Bedford.....	83.20	\$ 35.08	\$ 2918 65
	Benton	82.30		2887 08
	Bradley	92.20		3234 37
	Carroll.....	138.10		4844 54
	Carter	36.00		1262 88
	Cheatham.....	19.00		666 52
	Coffee	59.75		2096 03
	Crockett.	70.68		2479 45
	Davidson	419.29		14708 69
	Dickson.....	57.00		1999 56
	Fayette.....	259.30		9096 24
	Franklin.....	192.02		6736 06
	Gibson	320.14		11230 51
	Giles.....	266.88		9362 15
	Greene	121.00		4244 68
	Hamblen	81.00		2841 48
	Hamilton.....	455.00		15961 40
	Hardeman.....	287.59		9387 05
	Hawkins.....	9.00		315 72
	Haywood.....	172.86		6063 92
	Henry	155.65		5460 20
	Hickman	20.00		701 60
	Houston.....	96.10		3371 18
	Humphreys	56.60		1985 52
	James	26.36		924 70
	Jefferson.....	70.00		2455 60
	Knox	145.28		5096 42
	Lincoln.....	31.33		1099 05
	Loudon.....	68.40		2399 47
	McMinn.....	100.80		3536 06
	McNairy.....	106.00		3718 48
	Madison	242.14		8494 27
	Marion	86.45		3032 66
	Marshall.....	24.17		847 88
	Maury.....	270.15		9476 86
	Monroe.....	42.12		1477 57
	Morgan.....	112.00		3928 96
	Montgomery.....	175.32		6150 22
	Obion.....	155.66		5460 55
	Rhea	119.00		4174 52
	Roane	64.00		2245 12
	Robertson.....	174.46		6120 05
	Rutherford.....	162.90		5714 53
	Scott.....	102.00		3578 16
	Shelby	482.03		16909 61

N—TABULAR STATEMENT *Continued, showing amount of Telegraph Property.*

NAME OF COMPANY.	NAME OF COUNTY.	No. of Miles.	Value per Mile.	Total value
Chesapeake, Ohio & Southwestern.	Stewart	23.90	\$ 35.08	\$ 838 41
	Sullivan	72.00		2525 76
	Sumner	159.22		5585 43
	Tipton	26.52		930 32
	Washington	98.00		3437 84
	Weakley	160.10		5616 30
	Williamson	166.20		5830 29
	Warren	12.00		420 96
		7009.17		\$245881 68
	Dyer	23.50		\$ 824 34
	Lauderdale	24.10		845 44
	Obion	28.30		992 74
	Shelby	22.70		796 35
	Tipton	21.40		750 73
		120.00		\$ 4209 60

Western Union 7,009.17 Miles \$245,881.68

Chesapeake, Ohio & Southwestern 120.00 " 4,209.60

Total 7,129.17 " \$250,091.28

Increase of mileage over last report 1,749.26 Miles.

Increase of value over last report \$95,281.41

EAST TENNESSEE.

O 1—TABULAR STATEMENT of Privilege Tax Reported and Collected by County Court Clerks from December 19, 1882, to December 19, 1883.

Counties.	Merchants and Grocers.	Ten-Pins, Billiards, Shows, etc.	Tipplers.	Wholesale Liquor Dealers.	Litigation.	Conveyance of Lands.	Artists.
Anderson	\$ 483 00	\$ 10 00	\$ 412 50			\$ 35 84	\$ 4 50
Bledsoe	190 43			\$ 37 50		41 73	1 50
Blount	751 58	2 50			71 50	187 45	7 00
Bradley	580 81	175 00	529 50		7 50	5 00	4 00
Campbell	384 92	7 50	300 00	37 50		60 66	3 00
Carter	315 00				7 50	7 35	3 00
Claiborne	345 80		75 00			38 79	10 00
Cocke	776 90		377 50			52 72	7 50
Grainger	485 40		225 00			48 68	
Greene	1561 39	12 50	188 90		100 50	167 99	3 00
Hamblen	3484 74	905 25	9637 50	712 50	2 50	944 75	62 50
Hamilton	610 44	92 50	600 00		15 00	113 51	12 50
Hancock	271 40		150 00			39 53	
Hawkins	860 75	15 00	562 50		15 00	89 95	3 00
James	180 00					11 88	1 87
Jefferson	846 61		187 50		20 00	99 21	1 50
Johnson	127 50					59 17	
Knox	8079 14	675 00	5450 00	675 00	57 50	893 96	41 50
Loudon	548 81		375 36			56 95	7 50
Marion	618 12				4 50	78 75	7 00
Meigs	354 43				2 50	41 31	
Monroe	756 17	150 00	638 81		5 00	104 38	9 00
Morgan	210 00		450 00			11 50	9 50
McMinn	450 30	12 50	375 00			107 76	3 50
Polk	180 40			150 00	5 00	39 74	1 50
Rhea	225 60	12 50				30 02	3 00
Roane	437 25		412 50			66 25	1 50
Scott	402 92		1012 50			43 53	1 50
Sevier	538 15		75 00			101 19	
Sequatchie	109 00				10 00	16 50	1 50
Sullivan	827 06	35 00	835 22		5 00	100 34	1 50
Unicoi	50 00					23 62	
Union	462 10				32 50	44 90	3 50
Washington	681 20	17 50	487 50			76 80	10 00
Total	\$27319 32	\$2112 75	\$23367 82	\$1612 50	\$361 50	\$3941 71	\$230 47

EAST TENNESSEE—Continued.

○ 1—TABULAR STATEMENT of *Privilege Tax Reported and Collected by County Court Clerks from December 19, 1882, December 19, 1883.*

Peddlers and Drummers.	Brokers and Auctioneers.	Hotels.	Hacks and Wagons.	Sewing Machines.	Livery Stables.	Cattle and Horse Dealers.	Butchers.	Tax under Small Offense Law.	Other Privileges.	Total.
\$ 40 25				\$ 7 50				\$ 60 00		\$ 1012 34
4 85		\$ 25 04	\$ 6 75	2 50				13 00		326 91
12 50	\$ 10	62 40	10 00	12 50	\$ 16 00			18 00	\$200 00	1303 17
		2 00		32 50	87 00	\$ 68 74		75 00	340 00	1990 05
	2 50			2 50				23 50		821 58
27 50	5 00			2 50				6 00		343 85
2 50				20 00				6 00		503 09
25 00		28 00			4 00			90 25		1336 37
22 50	5 00	2 70	4 50	5 00				5 00		799 58
17 00	24 85	171 36		22 50				38 00	10 00	2144 98
	5 00	29 00	1 25		2 00	202 50		50 00	30 00	16252 96
					22 50			26 00	10 00	1554 70
12 50	5 00	18 65		40 00	28 00			23 00		460 93
1 25	5 00	14 50			7 50			9 00	15 00	1674 35
7 00								63 00		219 00
64 50	78 15	143 01	89 50	25 00	182 00	357 50		12 00		1244 82
2 50								71 30	63 75	205 67
25 75		18 35	4 38	22 50	3 37			34 00	7 50	16949 81
14 65								24 00		991 12
105 00		15 25	6 25	2 50				16 00	15 00	854 82
		43 16						17 00		436 89
2 50		5 00			4 00		15 00	10 00	5 00	1817 14
5 00		2 00		13 00				17 00		747 41
2 50		21 00		25 60	2 50			11 50		990 56
12 50			10 00					12 00		413 64
10 00		4 45						21 00		334 22
		12 25		2 50	1 00			22 00		1002 00
								7 00		1495 90
82 50		8 00	22 50	2 50	5 00			25 00		802 09
								9 00		144 00
5 00								11 00		1919 62
		24 00			6 50			16 00	50 00	82 62
										559 00
										1369 50
\$507 75	\$130 61	\$650 12	\$155 13	\$241 10	\$371 37	\$643 71	\$841 55	\$746 25	\$63133 69	

MIDDLE TENNESSEE.

O 2—TABULAR STATEMENT of *Privilege Tax Reported and Collected by County Court Clerks from December 19, 1882, to December 19, 1883.*

Counties.	Merchants and Grocers.	Ten-pins, Billiards, Shows, etc.	Tipplers.	Wholesale Liquor Dealers.	Litigation.	Conveyance of Lands.	Artists.
Bedford.....	\$663 06	\$267 91	\$1425 00			\$433 88	\$10 00
Cannon.....	770 96				\$14 00	70 85	5 00
Cheatham.....	286 75		187 50			12 35	1 50
Clay.....	193 94	7 50	187 50		22 50	90 62	
Coffee.....	648 54	60 00	500 00		25 00	78 02	3 00
Cumberland.....	126 00	37 50				24 75	1 87
Davidson.....	25482 11	1417 50	28188 50	5100 00	37 50	2147 49	184 00
DeKalb.....	517 30	7 50	300 00		17 50	59 13	
Dickson.....	420 80	160 00	562 50		12 50	62 13	
Fentress.....	161 90		75 01		5 00	24 17	
Franklin.....	800 75	170 00	787 50			143 96	1 50
Giles.....	2256 99	327 50	2347 50	37 50	12 50	291 68	10 00
Grundy.....	231 35	70 00	750 00		5 00	29 68	2 50
Hickman.....	583 58	17 50	298 00		15 00	108 00	13 87
Houston.....	89 40	162 50	337 50		5 00	22 19	
Humphreys.....	480 80	165 00	150 00		20 00	79 62	8 37
Jackson.....	597 68		312 50		10 00	37 77	
Lawrence.....	408 06	25 00	600 00		22 50	107 13	3 00
Lewis.....	68 75	7 50			10 00	19 47	1 50
Lincoln.....	997 00	218 33	975 00		32 50	283 30	12 50
Macon.....	287 61	2 50	112 50		17 50	65 82	4 00
Marshall.....	732 84	15 00	708 75			190 49	3 00
Maury.....	3223 75	517 50	2616 25	300 00	3 00	414 63	32 50
Montgomery.....	2194 85	224 25	2175 00	300 00	52 50	275 77	41 50
Moore.....	139 75	8 33	187 50		5 00	56 43	
Overton.....	509 95		190 65		5 00	30 85	10 75
Pickett.....	119 51					8 80	1 50
Putnam.....	287 40		150 00		20 00	30 27	
Robertson.....	922 85	192 50	1087 50	675 00	20 00	215 59	11 00
Rutherford.....	1528 48	180 00	1350 00	225 00	45 00	406 61	
Smith.....	784 68				40 00	144 68	1 50
Stewart.....	318 10		618 61		7 50	51 00	3 00
Sumner.....	752 44	150 00	675 00		85 00	221 37	
Trousdale.....	279 97				7 50	38 01	
Van Buren.....	45 00				5 00	17 32	
Warren.....	859 18	185 83	600 00	150 00	17 50	129 69	12 50
Wayne.....	440 17	37 50	412 50	235 00	17 50	96 10	3 00
White.....	618 21		37 50		10 00	64 09	3 00
Williamson.....	936 14	225 00	1318 45		40 00	245 50	21 00
Wilson.....	1063 47	175 83	312 50	45 00	15 00	300 70	16 00
Total.....	\$51589 68	\$5030 48	\$50536 71	\$7057 50	\$679 50	\$7089 44	\$415 86

MIDDLE TENNESSEE—Continued.

O 2—TABULAR STATEMENT of Privilege Tax Reported and Collected by County Court Clerks from December 19, 1882, to December 19, 1883.

Peddlers and Drummers.	Brokers and Auctioneers.	Hotels.	Hacks and Wagons.	Sewing Machines.	Livery Stables.	Cattle and Horse Dealers.	Butchers.	Tax under Small Offense Law.	Other Privileges.	Total.
\$13 75			\$2 50	\$2 50				\$52 00	\$125 50	\$2996 10
23 25			7 50		80 00					919 55
5 00				2 50				14 00		509 60
	20 00	16 00						9 00		547 06
10 00		57 00		43 75				23 00	10 00	1458 31
7 00		8 00		5 00				25 00		235 12
50 00	1029 15	741 50	391 50		503 50	180 00	2332 60	338 00	1124 00	69247 35
32 50	20 00			2 50				46 00		1002 43
12 50				5 00				11 00		1236 58
		4 50						16 00		286 59
7 50		76 75	2 00	2 50	30 00			66 00	1 00	2089 46
73 50	7 16	16 00	16 50	40 00	6 50		30 00	125 00	12 50	5610 81
10 00		69 35	7 50	21 33	9 00			6 00	15 00	1226 71
15 00		32 75			5 50			35 00		1124 20
								4 00	10 00	630 59
46 98		13 80		2 50		7 50		33 00		981 17
2 50	20 00	5 00		2 50				33 00		820 95
	38 00	15 70	2 75	5 00	28 00			45 00	10 00	1310 13
										107 22
52 50		13 25	10 00	12 50				60 00	50 00	2696 88
14 50	10 00	1 50	10 00					47 50		563 43
23 50								28 00		1699 58
58 75	85 00	140 14	44 00	47 50	133 00		100 00	28 00	61 00	7803 02
33 75	15 00	15 00	42 50		57 00		171 00	54 00	370 00	6022 12
1 25		1 00								394 26
3 75			28 50			22 50		21 00		822 98
						7 50		19 00		155 81
28 00		4 00						14 00		533 67
41 50		45 50	1 00	2 50				38 00	215 50	3468 44
	10 00				27 00			27 00		3799 09
36 75		14 35	27 25	6 00	5 00			45 00		1106 21
12 50		3 05		5 00				21 00		1039 76
					12 00		7 50	30 00	156 00	2069 31
3 75		8 00			3 00			6 00	10 50	356 73
6 00		4 50		2 50				8 00		87 32
38 75		42 35	20 00		43 25			58 00	35 00	2187 05
50 00		8 00	2 00	2 50	4 00			42 00		1340 27
1 25	10 00	4 00			23 00			25 00		736 05
22 50		11 50	11 50	7 50	6 00		14 57	39 00	10 50	2909 16
50 00	10 00	2 00			29 00		7 50	19 00		2046 00
\$758 58	\$1274 31	\$1372 49	\$629 00	\$220 08	\$954 75	\$217 50	\$2663 17	\$1501 50	\$2216 50	\$134237 05

WEST TENNESSEE.

O 3—TABULAR STATEMENT of *Privilege Tax Reported and Collected, by County Court Clerks from December 19, 1882, to December 19, 1883.*

Counties.	Merchants and Grocers.	Ten-pins, Billiards, Shows, etc.	Tipplers.	Wholesale Liquor Dealers.	Litigation.	Conveyance of Lands.	Artists.
Benton	\$ 279 70	\$ 185 00	\$ 450 00	.....	\$ 5 00	\$ 46 28	\$ 2 50
Carroll.....	632 60	342 50	975 00	.....	17 50	122 50	5 00
Chester.....	411 67	12 50	.....	.....	14 00	54 99	10 50
Crockett	1203 20	5 00	1125 00	.....	32 50	108 75	16 50
Decatur	381 55	22 50	112 50	.....	10 00	41 96	3 00
Dyer	1145 96	425 00	3375 00	\$ 300 00	30 00	161 87	32 50
Fayette	1165 90	390 00	8150 00	75 00	35 00	141 77	1 50
Gibson	1879 46	245 00	2887 50	.....	62 50	2 8 10	1 50
Hardeman	1471 33	215 00	2250 00	637 50	75 50	82 50	5 50
Hardin	410 53	.....	.....	.....	5 00	58 35	9 50
Haywood	1004 55	224 58	1287 50	.....	32 50	152 96	15 00
Henderson	768 89	82 50	675 00	.....	42 50	17 45	1 50
Henry	944 53	315 00	1425 00	.....	65 50	115 06	28 00
Lake	263 50	.....	300 00	.....	7 50	41 86	1 50
Lauderdale	989 35	32 50	1902 50	.....	60 00	170 75	6 00
Madison	1565 35	450 00	3225 00	52 50	35 00	186 66	1 50
McNairy	497 82	.....	37 50	.....	32 50	24 53	13 50
Obion	1439 86	307 50	2854 52	.....	87 50	289 77	5 50
Perry	377 60	22 50	75 00	.....	17 50	84 18	1 50
Shelby	15469 47	1760 00	33285 00	3600 00	102 50	1687 44	236 50
Tipton	1021 24	347 50	2025 00	37 50	127 50	132 84	18 00
Weakley	509 85	187 50	1837 50	.....	60 00	1 6 94	2 50
Total.....	\$33816 31	\$5562 07	\$63204 52	\$4702 50	\$957 50	\$4326 02	\$419 00

RECAPITULATION, 1883.

East Tennessee.....	\$27319 32	\$2122 75	\$23857 81	\$1612 50	\$361 50	\$3841 71	\$230 47
Middle Tennessee	51589 68	5090 48	50536 71	7057 50	679 50	7089 44	415 88
West Tennessee.....	33816 31	5552 08	63204 52	4702 50	957 50	4326 02	419 00
Total in State.....	\$112725 31	\$12705 31	\$137099 05	\$13372 50	\$1908 50	\$15257 17	\$1065 33

WEST TENNESSEE—Continued.

O 3—TABULAR STATEMENT of Privilege Tax Reported and Collected by County Court Clerks from December 19, 1882, to December 19, 1883.

Peddlers and Drummers.	Brokers and Auctioneers.	Hotels.	Hacks and Wagons.	Sewing Machines.	Livery Stables.	Cattle and Horse Dealers.	Butchers.	Tax under Small Offense Law.	Other Privileges.	Total.
\$35 00		\$12 10		\$5 00	\$4 00			\$10 71	\$7 50	\$987 79
7 50		7 50						3 00		2140 60
52 50	20 00	8 50	7 00	2 50	23 00			59 00		611 16
9 50		11 00		10 00	18 00			3 00		2605 45
41 50		12 00		20 00				22 00		615 01
15 00	2 50	97 50	2 00	5 00	43 50		30 00	28 00	85 00	5802 83
24 00		19 00	9 10	10 00	91 00	22 50		46 00	59 70	5233 97
40 00		44 00		2 50	12 00			44 00		5500 56
7 50		61 50	12 00	5 00	48 50			37 00		4941 79
37 00				2 50				30 00		523 38
26 50		3 75	6 00	2 50	54 00		30 00	30 00	60 00	2880 34
17 00	20 00	20 00		5 00	21 00	12 00		37 00		1733 34
6 00		61 75	12 00					27 00	95 00	3179 84
42 50		9 00			13 75			32 00		604 36
20 00		20 00			35 00			24 00	15 00	3276 39
39 00		25 50	25 00			120 00		14 00	125 00	5879 51
25 00		10 00						34 00	35 00	785 85
12 50		80 75		5 00	22 75		90 00	16 00	31 08	5255 23
95 00	610 78	3 15								593 30
71 00		667 00	1338 66	204 25	90 00	2204 00	1041 00	1851 75		64239 39
41 50		-2 87	1 00	2 50	21 00		2 00			3872 95
		4 00		10 00			13 00			2832 79
\$685 50	\$653 28	\$1180 87	\$1412 76	\$87 50	\$611 75	\$124 50	\$2474 00	\$1552 71	\$2365 03	\$12415 83

RECAPTULATION, 1883—Continued.

\$507 75	\$130 61	\$650 12	\$155 13	\$241 10	\$371 32		\$643 74	\$841 55	\$746 25	\$63183 69
788 58	1274 31	1372 49	629 00	220 08	94 75	217 50	2683 17	1501 50	2214 50	134237 05
665 50	653 28	1180 87	1412 76	87 50	611 75	124 50	2474 00	1552 71	2365 03	124105 83
\$1961 83	\$2058 20	\$3203 48	\$2196 89	\$548 68	\$1937 87	\$342 00	\$5780 91	\$3895 76	\$5327 78	\$321476 57

EAST TENNESSEE.

P 1—TABULAR STATEMENT of *Privilege Tax reported and collected by County Court Clerks from December 29, 1883, to December 19, 1884, inclusive.*

Counties.	Merchants and Grocers.	Ten-pins, Billiards, Shows, etc.	Tipplers.	Wholesale Liquor Dealers.	Litigation.	Conveyance of Land.	Artists.
Anderson	\$285 40	\$150 00	\$450 00		\$5 00	38 75	.....
Bledsoe	202 01	7 50	37 50		5 00	35 30	.....
Blount	518 57	22 50			45 50	101 94	14 00
Bradley	299 04	158 50	600 00			79 48	2 50
Campbell	306 50		563 10		30 00	34 75	4 50
Carter	191 40				9 00	6 87	.....
Claiborne	293 59	150 00			10 50	40 73	10 00
Cooke	419 80		310 00		6 50	50 84	.....
Grainger	316 61	2 50	225 00		3 00	23 21	.....
Greene	1501 45	200 00	112 50		95 50	141 48	1 50
Hamilton	3424 14	1213 00	10075 00	637 50	259 00	834 04	100 00
Hamblen	555 90	238 33	900 00		10 00	63 72	11 50
Hancock	135 00		75 00			32 40	.....
Hawkins	935 06	33 75	525 00		2 50	110 67	3 00
*James	195 19					23 84	1 50
Jefferson	657 94	32 50	637 50		10 50	121 79	6 00
Johnson	109 80					4 00	6 00
Knox	9963 15	735 00	6900 00	535 00	88 50	898 43	101 50
Loudon	814 94		387 50			57 23	1 50
Marion	493 70	15 00			12 50	39 56	7 00
Meigs	337 00	15 00			41 00	54 53	9 00
Monroe	568 73	167 50	600 00		2 50	49 34	14 00
Morgan	131 50	10 00	487 50		6 00	10 95	1 50
McMinn	431 67	13 33	300 00		5 00	83 98	7 00
Polk	220 17		257 10		11 00	31 24	4 50
Rhea	351 60	81 25	112 50			16 25	3 00
Roane	627 36	150 00	347 50		8 00	61 54	.....
Scott	237 70		825 00			40 58	.....
Servier	436 49		300 00			86 82	3 00
Sequachee	33 10	7 50			5 50	42 32	1 50
Sullivan	879 71	40 00	840 00		30 00	87 49	6 00
Unicoi	59 00	7 50				10 99	.....
Union	284 30				2 50	45 16	3 00
Washington	771 80	165 00	562 50		15 00	44 98	10 00
Total.....	\$26999 32	\$3565 66	\$26430 20	\$1172 50	719 50	\$3404 96	\$333 00

* December report not in.

EAST TENNESSEE—Continued.

P 1—TABULAR STATEMENT of *Privilege Tax* reported and collected
by County Court Clerks from December 29, 1883, to December
19, 1884, inclusive.

Peddlers and Drammers.	Brokers and Auctioneers.	Hogels.	Hacks and Wagons.	Sewing Machines.	Livery Stables.	Butchers.	Tax under Small Offense Law.	Other Privileges.	Total.
							\$12 00		\$941 15
12 00	25 00	21 59	5 00		1 50		9 00		296 81
23 75		16 00	11 50				9 00	3 00	779 80
5 00		2 10					30 00	11 87	1232 64
		2 00		2 50			33 00		978 95
10 00	10 00			2 50			24 00		235 77
				2 50			12 00		539 11
	2 50			10 00			62 00		859 14
19 00		12 70		35 00	8 00		39 00	10 00	572 82
44 50	67 18	203 00			6 00	255 00	90 00	520 12	2176 18
10 00	2 50	12 54	2 25		15 00		84 00	11 25	17728 43
									1916 95
5 00	85 00	22 20	1 00	2 50	10 00		20 00		242 40
36 25	7 50	8 00		5 00			18 00	10 00	1755 68
							12 00		248 53
62 00	113 93	171 75	52 75		82 00	502 50	6 00		1534 98
1 25							12 00		125 80
31 00	7 50	7 70		5 00	14 00		392 50	193 00	20792 01
7 50							12 00		1274 41
5 00		33 25		3 33	5 50		8 00	1 25	660 95
5 00		41 25	10 00				6 00	76 25	468 27
2 50		6 00			10 00		9 00		1551 40
		2 00		5 00			3 60	1 25	712 70
18 57		10 50		2 50			15 00		863 73
20 50		10 50					37 50		546 01
12 00		10 50					8 00		583 67
2 50		5 25	1 25				33 00		1233 50
							36 00		1148 28
									871 31
21 50	9 58	16 00	2 50		3 00		14 00		89 92
5 00							3 00		1949 78
							22 00		85 49
20 00		16 00			16 00		42 00		366 96
									1663 28
\$579 82	\$330 64	\$620 39	\$86 25	\$73 33	\$171 00	\$757 50	\$1124 00	\$837 99	\$67006 06

MIDDLE TENNESSEE:

2—TABULAR STATEMENT of *Privilege Tax reported and collected by County Court Clerks from December 20, 1883, to December 19, 1884, inclusive.*

Counties.	Merchants and Grocers.	Ten-pins, Billiards, Shows, etc.	Tipplers.	Wholesale Liquor Dealers.	Litigation.	Conveyance of Lands.	Artists.
Bedford	\$937 73	\$202 00	\$1500 00	.....	\$67 50	\$302 85	.....
Cannon	420 28	.....	450 00	.....	6 00	73 66	\$1 50
Cheatham	261 87	.....	187 50	.....	4 50	20 55	4 50
Clay	183 13	.....	.....	.....	3 00	44 09	8 00
Coffee	408 29	27 50	450 00	.....	5 50	87 10	4 00
Cumberland	121 20	.....	112 50	.....	7 50	36 57	1 50
Davidson	32740 21	1422 00	29592 84	4912 50	168 50	2171 98	353 00
DeKalb	296 50	.....	112 50	.....	15 00	47 71	.....
Dickson	238 00	10 00	725 00	.....	7 50	29 37	4 50
Fentress	125 40	.....	112 50	.....	6 00	26 43	1 50
Franklin	998 91	162 50	450 00	.....	56 50	116 12	12 00
Giles	1837 69	133 75	2550 00	.....	2 50	277 46	26 00
*Grundy	232 35	15 00	412 50	.....	.....	20 30	5 50
Hickman	6 03	27 50	300 00	.....	24 60	98 65	9 00
Houston	74 90	10 00	187 50	.....	5 00	24 99	5 00
Humphreys	305 40	.....	300 00	.....	25 00	95 09	3 00
Jackson	317 76	.....	300 00	.....	.....	22 71	7 50
Lawrence	351 47	27 50	375 00	.....	40 50	108 16	6 00
Lewis	56 20	.....	.....	.....	15 00	9 70	1 50
Lincoln	704 18	217 50	1012 50	.....	7 50	260 82	26 50
Macon	176 85	.....	75 00	.....	2 50	42 69	5 50
Marshall	707 82	45 00	734 58	.....	.....	154 64	6 00
†Maury	2208 80	161 20	2725 00	.....	104 50	436 51	19 75
Montgomery	2232 65	98 33	2250 00	225 00	27 50	294 32	36 50
Moore	165 90	17 50	262 50	.....	.....	36 79	.....
Overton	279 43	.....	150 00	.....	2 50	24 21	9 00
*Pickett	101 06	.....	.....	.....	5 50	6 18	4 50
Putnam	243 50	.....	150 00	.....	.....	12 96	1 50
Robertson	671 40	172 50	937 50	675 00	20 00	261 85	13 50
Rutherford	1323 36	152 50	1350 00	712 50	17 50	373 94	.....
Smith	689 10	7 50	112 50	.....	17 50	169 90	11 50
Stewart	435 58	5 00	800 00	.....	2 50	65 28	4 50
Sumner	558 22	152 50	900 00	.....	47 50	170 47	.....
Trousdale	216 83	.....	75 00	.....	5 00	44 15	4 50
Van Buren	36 00	.....	37 50	.....	2 50	19 60	.....
Warren	791 45	25 00	637 50	.....	20 50	131 26	16 50
Wayne	507 70	22 50	450 00	.....	27 00	42 12	3 00
White	419 25	.....	375 00	.....	35 00	73 96	.....
Williamson	427 28	205 00	1200 00	.....	36 00	269 97	6 50
Wilson	1153 17	207 50	975 00	.....	38 00	265 32	17 00
Average	\$34685 00	\$3525 28	\$3327 42	\$6525 00	\$879 10	\$6792 81	\$640 25

*December report not in.

†June report not in.

MIDDLE TENNESSEE—Continued.

P 2—TABULAR STATEMENT of Privilege Tax reported and collected
by County Court Clerks from December 20, 1883, to December
19, 1884, inclusive.

Peddlers and Drummers.	Brokers and Auctioneers.	Hotels.	Hacks and Wagons.	Sewing Machines.	Livery Stables.	Butchers.	Tax under Small Offense Law.	Other Privileges.	Total.
\$52 50		\$ 8 00	\$ 1 25				\$ 91 50	\$ 75 00	\$ 3236 33
38 00				\$ 2 50	\$ 13 00				1002 94
14 15				2 50			6 00		501 67
15 00	\$ 10 00	12 00					45 00		820 22
11 25		2 70					9 00		1003 34
		6 00					3 00		288 27
74 50	4347 30	702 50	425 75		511 25	\$3080 00	1896 00	2632 12	84529 83
7 50	5 00			2 50			38 00		524 51
22 50					5 00		4 00		1046 87
5 00							3 00		279 83
43 75		80 52	20 50	5 00	22 25		57 00	105 00	2130 05
62 00	14 85	14 00	10 00	27 50	55 00		211 00	120 25	5342 00
10 00				5 00	16 00		6 00	7 30	729 95
45 50		12 40			12 00		36 00		1215 98
2 50	5 00						4 00	20 00	338 89
7 50					23 00		29 00		787 99
5 00	25 00				2 00		27 00		746 97
	5 00	23 15	2 00	2 50	5 50		6 00		966 78
									82 40
39 00		7 00	5 00				125 00		2405 00
9 50	10 00						20 00		341 94
26 25		19 00		5 00			12 00	22 50	1732 79
98 50	447 25	186 40	44 75	54 83	181 00	105 00	38 00	253 75	7070 24
60 50	5 00	48 50	30 25		36 00	55 00	52 00	409 00	5859 55
2 50					7 00				492 19
7 50	20 00		18 75				61 00	5 00	577 41
							6 00		125 24
		14 00	5 00				24 00	2 50	473 46
68 25		56 50	5 50	5 00			79 00	123 33	3092 43
5 00			13 25		103 00	2 50	49 00		4102 55
40 75					30 00		51 00		1129 75
25 00		1 05		5 00			47 00		1390 91
7 50			8 00				54 50	165 00	2093 67
8 75							9 00		363 28
		4 50					19 00		119 10
24 50		38 55	20 00	7 50	31 00		45 00	10 50	1803 26
15 00		18 00	2 00	2 50	5 00		42 00		1196 82
10 00	20 00				18 00		18 00		997 21
48 25	5 00	7 50	2 00	20 00	22 00		39 00		2228 50
27 00		38 00	50		48 50		31 00	221 00	3021 99
\$933 40	\$4919 40	\$1328 27	\$614 50	\$147 33	\$1145 50	\$3242 50	\$2793 00	\$4177 25	\$154681 01

WEST TENNESSEE.

P 3—TABULAR STATEMENT of *Privilege Tax* reported and collected by County Court Clerks from December 20, 1883, to December 19, 1884, inclusive.

Counties.	Merchants and Grocers.	Ten-pins, Billiards, Shows, etc.	Tipplers.	Wholesale Liquor Dealers.	Litigation.	Conveyance of Lands.	Artists
Benton	\$ 263 55		\$ 787 50		\$ 18 27	\$ 56 69	
Carroll.....	306 27	\$ 7 50	375 00		2 50	61 59	
Chester.....	239 97	45 00	150 40		5 00	56 32	\$ 3 00
Crockett.....	721 00	215 00	1775 00		12 50	91 20	15 00
Decatur	220 90	15 00	187 50		54 00	61 35	6 00
Dyer	1143 69	230 00	2737 50		28 50	138 25	72 80
Fayette	1148 70	65 00	3487 50	\$ 37 50	27 50	127 48	4 50
Gibson	1209 17	135 00	3375 00		45 00	311 54	14 00
Hardeman	1565 36	42 50	2475 00	225 00	80 50	82 64	6 50
Hardin	413 25				23 00	47 76	7 50
Haywood	1123 85	67 50	1875 00		98 00	104 73	10 00
Henderson	640 73	37 50	225 00		6 00	83 15	5 50
Henry	938 94	90 83	1275 00		43 50	185 49	8 50
Lake	142 00	7 50	262 50		12 00	26 58	1 50
Lauderdale	760 15	22 50	1725 00		13 50	130 91	
Madison	1182 25	122 50	3175 00	37 50	24 00	244 87	51 50
McNairy	471 83	30 00	112 50		10 00	64 87	1 50
Obion	1550 85	138 33	2925 00		30 00	419 26	23 00
Perry	371 43	22 50	75 00			63 81	1 50
Shelby	18178 51	1815 00	32687 50	3712 50	122 50	1671 92	220 00
Tipton	1013 18	160 00	900 00			42 15	
Weakley	454 70	15 00	1687 50		22 50	200 66	
Total.....	\$34055 28	\$3284 16	\$61775 40	\$4012 50	\$655 77	\$4273 22	\$452 30

RECAPITULATION, 1884.

East Tennessee.....	\$26999 32	\$3565 66	\$26430 20	\$1172 50	\$719 50	\$3404 96	\$333 00
Middle Tennessee.....	54685 00	3525 28	53327 42	6525 00	879 10	6792 81	640 25
West Tennessee.....	34055 28	3284 16	61775 40	4012 50	655 77	4273 22	452 30
Total in State.....	\$115739 60	10375 10	\$141533 02	\$11710 00	\$2254 37	14470 99	\$1425 55

WEST TENNESSEE—Continued.

P 3—TABULAR STATEMENT of Privilege Tax reported and collected by County Court Clerks from December 20, 1883, to December 19, 1884, inclusive.

Peddlers and Drummers.	Brokers and Auctioneers.	Hotels.	Hacks and Wagons.	Sewing Machines.	Livery Stables.	Butchers.	Tax under Small Offense Law.	Other Privileges.	Total.
\$ 19 50				\$ 2 50			\$ 8 76		\$1154 77
5 00							4 00		761 86
13 25		\$ 5 35	\$ 2 75				30 00	\$ 5 00	556 04
7 50	\$20 50	16 00		7 50	\$ 8 50		8 00	25 00	2422 70
65 75		6 00					15 00		611 50
68 50	75 00	73 25	12 08	5 00	15 00		87 50		4637 07
12 50	2 50	28 00	7 00	37 00	52 00		87 00	35 00	6154 18
47 50	2 50	68 80	9 75	16 00	75 00		121 00	30 00	5460 28
12 50		73 00	5 00		36 50		27 00	70 00	4701 50
10 00							8 00		509 51
15 00	7 50	5 00	7 25		20 00		4 00	110 00	3447 83
51 25		12 25		10 00	10 00		45 00		1126 38
27 50	85 00	50 30	16 75	2 50	18 75		82 00	20 00	2845 08
		9 00					3 00		464 08
2 50	2 50	22 10		15 00	9 50		82 95	20 00	2805 61
52 25		40 50	10 00	10 00	30 00	\$ 60 00	4 00	190 00	5234 37
7 50		8 40					27 00	20 00	753 60
22 50		57 63		7 50	36 00		79 00	23 58	5311 65
7 50	1 25	3 15		7 50			35 00		588 64
117 25	1844 49	596 50	1378 10		722 50	2210 00	2675 00	1112 50	69064 27
		7 40			9 00		5 00		2136 73
32 00		13 50		5 00			4 50		2435 36
\$597 25	\$2041 24	\$1096 13	\$1448 68	\$125 50	\$1042 75	\$2270 00	\$3392 71	\$1660 06	\$122182 97

RECAPTULATION, 1884—Continued.

\$379 82	\$ 330 64	\$ 620 39	\$ 86 25	\$ 73 33	\$ 171 00	\$ 757 50	\$1124 00	\$ 837 99	\$ 67006 06
938 40	4919 40	1328 27	614 50	147 33	1145 50	3242 50	2793 00	4177 25	145681 01
597 25	2041 24	1096 13	1448 68	125 50	1042 75	2270 00	3392 71	1660 08	122182 97
\$1915 47	\$7291 28	\$3044 79	\$2149 43	\$346 16	\$2359 25	\$6270 00	\$7309 71	\$6675 32	\$334870 04

Q.—TABULAR STATEMENT showing the amount of State Tax Assessed for the year 1882, in the several Counties of the State, the amount of abatements, and the net amount paid into the State Treasury, being a complete exhibit of the Revenue Account of the Trustee of each County for the year 1882.

COUNTIES.	NAMES OF TRUSTEES.	STATE TAX.			ABATEMENTS.				Trustees' Commissions.	Net amount paid into the State Treasury.
		Twenty cts per \$100 on original taxable prop'y.	Supplemental assessment by Trustees and penalty.	LAND SALE.		County Court Releases including scarp certificates.				
				State Tax.	Adver- tising.					
Anderson	J. H. Hicks	\$2861 25	\$ 7 15	\$36 41	.....	\$801 10	.....	\$117 53	\$1913 36
Bedford	J. L. Goodrum	9479 67	135 71	13 36	5 00	105 20	.....	489 73	9002 09
Benton	Wm. M. King	1801 05	21 82	7 33	5 00	57 78	.....	105 12	1647 64
Bledsoe	R. H. Hudson	1274 79	4 85	22 75	.....	21 60	.....	73 10	1162 19
Blount	J. A. Goddard	3371 91	7 26	21 52	5 00	22 25	.....	135 53	3194 87
Bradley	J. A. Denton	4737 25	108 54	.....	.....	975 70	.....	206 27	3663 82
Campbell	Silas Hamaker	1659 69	1 72	4 30	5 00	66 64	.....	95 10	1490 37
*Cannon	E. J. Lorraine	2317 99	15 00	15 34	.....	3 34	.....	.....	2030 00
Carroll	J. F. Rogers	6400 48	21 44	27 09	5 00	151 59	.....	291 23	4947 01
Carter	J. J. McCorkle	1694 11	3 86	9 68	5 00	28 62	.....	99 24	1555 43
Cheatham	M. Tomlin	1810 35	11 50	12 01	.....	45 66	.....	105 84	1658 34
Chester	W. S. Rhodes	1557 03	225 53	.....	5 00	1058 43	.....	43 14	675 99
Claiborne	E. C. Baylor	1906 12	1 75	.....	.....	61 89	.....	110 70	1735 28
Clay	W. C. Percel	1672 32	3 00	.....	.....	31 69	.....	98 60	1545 03
Cocke	B. A. Proffitt	2707 09	12 58	.....	.....	26 29	.....	161 58	2531 80
Coffee	J. H. Smith	2562 94	28 11	64 30	5 00	55 38	.....	157 96	3208 41
Crockett	T. N. Skelton	3166 44	18 74	32 14	5 00	16 83	.....	187 86	2943 35
Cumberland	James M. Raina	791 73	44 16	129 53	.....	48 42	.....	39 42	618 52
Davidson	Geo. K. Whitworth	49448 43	1549 26	4135 20	.....	2129 86	.....	1127 27	43605 86

Decatur	John A. Long	1568 98	13 07	27 35	.....	26 66	91 37	1431 62
DeKalb	Geo. W. Grigson	3124 33	9 60	37 21	.....	16 67	182 95	2897 10
Dickson	R. D. Eubank	1931 30	8 96	42 58	3 00	38 78	111 35	1744 55
Dyer	Albert G. Pierce	4910 65	59 86	208 06	.....	44 61	259 90	4157 94
Fayette	Thomas G. McClellan	6053 80	149 57	103 20	.....	27 06	310 93	5762 18
Fentress	O. P. Cooper	945 94	12 50	10 36	.....	81 35	33 96	532 77
Franklin	R. G. Smith	3442 08	45 40	19 64	.....	41 59	198 02	3228 23
Gibson	John W. Ramsey	9039 53	15 71	122 78	.....	111 65	444 52	8376 29
Giles	H. C. McLaurine	10075 04	244 60	54 35	5 00	1994 21	449 50	8416 58
Grainger	J. J. Alexander	2565 23	20 47	8 25	.....	49 71	151 62	2376 11
Greene	John R. Hughes	5150 58	35 63	27 03	5 00	52 97	261 17	4840 04
Grundy	Jacob Fehr	1674 09	1137 74	66 98	5 00	542 12	131 82	2065 91
Hamblen	J. E. Thompson	2851 11	5 81	.....	5 00	15 04	148 03	2688 85
Hamilton	A. Shelton	11891 43	1036 66	268 41	5 00	258 89	370 61	12025 18
Hancock	Jesse B. Mitchell	1045 74	6 61	06	.....	14 15	62 28	975 86
Hardeman	J. C. Savage	5373 21	44 77	23 05	5 00	28 26	300 21	5061 46
Hardin	T. K. Hurst	2783 74	19 68	.....	.....	36 45	165 96	2601 01
Hawkins	J. S. Gillenwaters	3808 97	117 48	.....	5 00	55 05	214 06	3636 63
Haywood	W. J. Lyle	5670 65	38 31	362 40	.....	19 00	251 43	5076 13
Henderson	Samuel Howard	3325 26	10 78	23 64	5 00	73 28	183 36	3050 78
Henry	James Bomar	5570 52	36 35	38 64	5 00	983 22	274 80	4305 21
Hickman	A. W. Warren	3203 21	28 55	4 89	2 20	24 50	181 12	3019 05
Houston	R. C. Rushing	769 57	1 95	.....	.....	70	44 24	726 58
Humphreys	W. I. White	2186 23	5 26	32 13	5 00	33 29	127 20	1992 87
Jackson	A. S. Cooper	2038 42	14 64	.....	.....	11 00	122 52	1919 54
James	J. M. McCulley	1096 08	5 91	3 29	.....	13 48	65 10	1020 12
Jefferson	Daniel Thornton	3916 65	4 35	5 05	.....	11 02	207 30	3697 63
Johnson	James S. Laws	950 34	1 08	2 52	.....	1 91	56 81	890 18
Knox	B. F. Bearden	17644 99	192 68	213 49	5 00	1387 75	402 55	15768 88
Lake	J. G. Tipton	1502 76	17 74	19 98	5 00	6 78	89 08	1399 66
Lauderdale	J. M. Jenkins	3351 04	77 80	145 55	10 00	95 31	115 57	3082 41
Lawrence	W. H. Hagan	1797 12	25 52	7 79	5 00	9 08	108 00	1692 77
Lewis	R. W. Grimes	477 80	14 10	5 48	.....	8 50	28 62	449 30
Lincoln	Henry Henderson	7187 78	20 82	16 82	4 00	32 40	340 57	6814 81
Loudon	J. H. Williams	2618 38	25 29	5 27	10 00	10 42	157 02	2460 96
Macon	Jesse West	1651 68	26 79	.....	.....	24 12	99 26	1555 09
McMinn	J. G. Hale	3743 16	49 31	8 13	3 00	28 19	225 18	3527 97

Q—TABULAR STATEMENT showing the amount of State Tax Assessed for the year 1882, in the several Counties of the State, the amount of abatements, and the net amount paid into the State Treasury, being a complete exhibit of the Revenue Account of the Trustee of each County for the year 1882.

COUNTIES.	NAMES OF TRUSTEES.	STATE TAX.		ABATEMENTS.				Trustees' Commissions.	Net amount paid into the State Treasury.
		Twenty cts per \$100 on original assessment of taxable prop'y.	Supplemental assessment by Trustees and penalty.	LAND SALE.		County Court Releases including scarp certificates.			
				State Tax.	Adver- tising.				
McNairy	James L. Littlefield.....	\$3108 97	\$51 85	25 09	5 00	266 73	171 84	2692 16	
Madison	Z. N. Wright.....	8295 69	28 84	604 90	5 00	587 71	311 40	6815 52	
Marion	John H. Parrott.....	3538 90	52 54	229 55	5 00	1072 57	117 85	2166 47	
Marshall	A. B. Stilwell	5504 94	54 47	32 08	10 00	71 37	239 58	5206 88	
Mauzy	H. F. Farris	14928 22	73 21	400 26	5 00	67 32	541 89	13986 96	
Meigs	J. R. Moore.....	1872 37	10 00	1 20	.....	5 74	111 50	1763 93
Monroe.....	I. C. Warren.....	3894 48	10 55	74 66	.....	40 35	227 40	3562 62
Montgomery.....	John S. Neblett.....	8909 91	8 64	153 07	5 00	208 60	325 79	8226 06	
Moore	B. E. Spencer.....	1209 15	3 30	1 76	5 00	4 75	72 00	1128 94	
Morgan.....	John D. Kreis.....	1116 90	27 53	226 00	.....	20 00	53 88	844 45
Obion.....	Geo. P. Hurt.....	6924 59	34 28	88 86	10 00	141 12	357 39	6361 50	
Overton.....	J. J. Phillips.....	1251 27	19 41	.....	.....	68 38	72 68	1138 78
Perry.....	E. T. Ledbetter.....	1556 08	41 63	3 10	.....	16 75	29 04	455 94
Pickett	James Rector.....	498 10	3 63	.....	.....	15 84	96 54	1512 68
Polk	Isaac Nicholson.....	1624 26	80	.....	.....	175 30	113 76	1783 16
Putnam	J. M. Whitson.....	2079 91	7 41	15 10	.....	25 56	117 24	1836 94
Rhea	G. M. D. Spence.....	1982 26	35 11	17 63	.....	188 43	252 52	4027 72
Roane	G. A. Guenther.....	4099 21	407 07	32 61	5 00	92 92	277 67	5412 64	
Robertson.....	G. P. Martin.....	5769 52	57 00	38 29	5 00	.....	.....	.....

Rutherford.....	J. P. Hale.....	12157 39	95 87	276 26	5 00	38 27	541 75	11391 98
Scott	E. M. Saxton.....	1109 32	60 70	.....	.....	267 29	64 12	848 61
Sequatoble	W. B. Elliott.....	531 46	8 98	19 38	.....	24 34	29 76	466 96
Savler	J. S. Maples.....	2804 79	46 28	13 87	5 00	17 09	168 90	2646 21
Shelby	A. J. Harris.....	37815 10	192 36	4899 81	.....	1278 40	681 14	81148 11
Smith	W. J. Johnson.....	5744 42	52 94	.....	.....	61 82	309 11	5426 48
Stewart	Chas. Coppedge.....	2095 59	17 24	11 44	.....	40 79	123 60	1937 00
Sullivan	Geo. R. Barnes.....	4025 04	34 40	95 00	5 00	44 36	214 15	3700 93
Sumner	J. H. McLaren.....	7561 71	219 28	371 38	.....	141 00	271 09	6987 52
Tipton.....	B. F. Locke.....	4392 10	39 50	142 01	5 00	55 16	231 74	3997 69
Trousdale	J. H. Wood.....	1837 76	32 18	11 27	5 00	13 04	110 40	1730 23
Unicoi	M. F. Boothe.....	378 79	35	15 56	.....	9 16	20 94	328 48
Union	John Bowman.....	1489 89	8 16	19 52	.....	27 15	87 06	1364 32
Van Buren.....	Alex. Grison.....	480 95	13 00	7 80	.....	9 41	28 58	448 18
Warren.....	H. A. Cunningham	3287 52	26 14	.....	.....	30 81	196 97	3085 88
Washington.....	A. M. Stewart.....	3317 37	25 05	31 29	5 10	23 24	196 92	3085 97
Wayne	C. W. Shipman	2294 82	14 08	14 16	.....	49 52	134 70	2110 52
Weakley	Lea Harris.....	5692 28	731 06	31 52	.....	146 18	336 63	5909 01
White	S. M. Snodgrass.....	2147 56	9 53	75	.....	11 71	128 64	2015 99
Williamson	B. T. Wilson.....	10353 48	45 05	157 67	5 00	47 97	495 08	9692 81
Wilson	L. N. M. Cook.....	9350 49	101 51	64 33	5 00	42 00	431 50	8909 17
Total .....	.....	\$443859 43	\$8444 23	\$14588 23	\$242 20	\$16854 31	\$18987 50	\$401377 11

Account not closed, which results in this table being out of balance \$234.31, the amount of Trustee's delinquency.

R—TABULAR STATEMENT showing the amount of State Tax Assessed for the year 1883, in the several Counties of the State, the amount of the Abatements, and the net amount paid into the State Treasury, being a complete exhibit of the Revenue Account of the Trustee of each County for the year 1883.

COUNTIES.	NAMES OF TRUSTEES.	STATE TAX.		ABATEMENTS.				Trustees' Commissions.	Net amount paid into the State Treasury.
		Thirty cents per \$100 on original assessment of taxable property	Supplemental assessment by Trustees, and Penalty.	LAND SALES.			County Court Releases, including scalp certificates.		
				State Tax	Adver- tising.				
*Anderson.....	J. H. Hicks.....	\$4244 37	\$19 22	\$10 50	.....	.....	\$1189 07	.....	\$2907 10
Bedford.....	J. L. Goodrum.....	14270 35	79 20	75 76	\$5 00	.....	129 21	\$598 07	13541 51
*Benton.....	Wm. M. King.....	2587 14	90	11 97	.....	.....	101 82	.....	1946 95
Bledsoe.....	R. H. Hudson.....	1870 03	15 18	15 53	.....	.....	25 36	110 64	1733 68
Blount.....	J. A. Goddard.....	5022 10	35 13	32 04	5 00	.....	64 06	190 31	4765 82
Bradley.....	J. A. Denton.....	5810 93	22 98	.....	.....	.....	58 85	322 82	5452 24
Campbell.....	Silas Hatmaker.....	2705 19	25 35	40 26	.....	.....	237 64	147 12	2305 52
*Cannon.....	E. J. Loranee.....	3515 43	.....	.....	.....	.....	.....	.....	32 00
Carroll.....	J. F. Rogers.....	7794 58	22 40	59 70	5 00	.....	110 59	399 62	7242 07
Carter.....	J. J. McCorkle.....	2361 83	9 45	23 74	5 00	.....	73 17	166 14	2603 23
*Cheatham.....	M. Tomlin.....	2731 03	.....	8 70	.....	.....	77 50	.....	2155 16
Chester.....	W. S. Rhodes.....	2572 20	33 39	22 08	.....	.....	27 67	153 30	2402 54
*Claiborne.....	E. C. Baylor.....	2382 21	.....	25 60	.....	.....	70 75	.....	2508 01
*Clay.....	W. C. Perceel.....	2616 82	.....	.....	.....	.....	39 28	.....	634 97
Cocke.....	B. A. Proffitt.....	3992 70	3 30	.....	.....	.....	7 56	239 28	3749 16
Coffee.....	J. H. Smith.....	3947 81	11 00	105 07	5 00	.....	68 52	226 80	3553 42
Crockett.....	T. N. Skelton.....	4615 84	54 10	65 58	5 00	.....	30 77	264 03	4304 56
*Cumberland.....	James M. Rains.....	1239 18	.....	.....	.....	.....	12 28	.....	906 65
Davidson.....	Geo. K. Whitworth.....	79780 38	11733 31	4834 34	.....	.....	12103 85	1734 23	73841 27

Decatur.....	J. A. Long.....	2844 08	2 85	28 81	.....	23 30	137 64	2157 18
DeKalb.....	Geo. W. Gragon.....	4560 89	22 11	87 13	5 00	62 51	253 22	4174 64
Dickson.....	R. D. Eubank.....	2965 62	16 59	60 07	8 00	48 65	172 20	2698 30
Dyer.....	Jno. M. Nichols.....	7802 23	76 81	320 68	5 00	64 63	334 88	7103 86
Fayette.....	Thos. G. McClellan.....	8342 91	126 62	166 82	.....	79 98	413 56	7809 17
*Fentress.....	O. P. Cooper.....	1019 01	11 49	56 36	.....	138 70	.....	711 79
Franklin.....	R. G. Smith.....	5118 34	24 24	26 63	5 00	65 09	280 50	4765 36
*Gibson.....	John W. Ramsey.....	13519 49	34 60	220 31	5 00	155 79	.....	11364 16
Giles.....	H. C. McLaurine.....	13476 73	115 70	111 90	5 00	101 32	577 75	12796 48
*Grainger.....	J. J. Alexander.....	3785 13	7 65	47 25	.....	8 29	.....	8500 00
Greene.....	John R. Hughes.....	7579 13	41 44	79 06	.....	24 73	391 58	7125 20
Grundy.....	Jacob Fehr.....	3511 61	20 01	117 18	.....	332 56	184 86	2897 02
Hamblen.....	J. E. Thompson.....	4462 33	61 05	3 95	5 00	78 91	242 59	4192 93
Hamilton.....	A. Shelton.....	20513 30	61 95	352 97	5 00	310 84	541 44	19365 00
Hancock.....	Jessie B. Mitchell.....	1574 82	1 23	.....	.....	28 96	92 82	1454 27
Hardeman.....	J. C. Savage.....	7718 63	57 53	70 82	.....	60 22	401 36	7243 81
Hardin.....	T. K. Hurst.....	4152 67	39 73	15 91	.....	85 27	245 46	3845 76
*Hawkins.....	J. S. Gillenwaters.....	5800 21	.....	31 08	5 00	.....	.....	4834 70
*Haywood.....	W. J. Lyle.....	7621 23	26 21	637 01	.....	38 58	.....	6133 00
Henderson.....	Samuel Howard.....	4007 97	12 39	34 93	5 00	65 16	224 72	3690 50
Henry.....	James Bomar.....	6379 18	16 50	38 46	5 00	36 19	357 15	6458 88
Hickman.....	A. W. Warren.....	4797 70	32 25	1 74	.....	18 90	261 12	4548 19
Houston.....	R. C. Rushing.....	1152 41	24 47	.....	.....	6 57	70 20	1100 11
*Humphreys.....	W. I. White.....	3317 87	.....	.....	.....	.....	.....	2800 00
*Jackson.....	A. S. Cooper.....	2963 60	53 41	.....	.....	51 86	.....	2600 00
James.....	J. M. McCulley.....	1672 05	15 92	8 05	.....	29 05	99 05	1551 82
*Jefferson.....	Daniel Thornton.....	6037 48	29 02	.....	.....	.....	.....	2048 23
Johnson.....	James S. Laws.....	1452 15	07	17 69	10 00	5 98	85 08	1333 47
Knox.....	W. H. Swan.....	25475 45	178 16	355 74	5 00	481 85	607 96	24207 06
Lake.....	J. G. Tipton.....	2168 13	3 99	27 15	5 00	7 99	127 86	2004 12
Lauderdale.....	J. M. Jenkins.....	5063 09	24 15	279 03	.....	58 29	179 03	4570 89
*Lawrence.....	W. H. Hegan.....	2775 65	.....	41 88	.....	90 83	.....	1220 12
*Lewis.....	R. W. Grimes.....	821 26	30 78	9 30	.....	40 36	.....	458 18
Lincoln.....	Henry Henderson.....	11175 12	45 32	19 71	5 00	106 06	421 38	10668 29
Loudon.....	J. H. Williams.....	3849 76	8 83	.....	5 00	18 15	230 12	3605 32
Macon.....	Jesse West.....	2502 51	17 04	.....	.....	57 08	147 72	2314 75
*McMinn.....	J. G. Hale.....	5826 40	60 83	39 55	5 00	33 55	.....	5337 26

R—TABULAR STATEMENT showing the amount of State Tax assessed for the year 1883, etc.—Continued.

COUNTIES.	NAMES OF TRUSTEES.	STATE TAX.			ABATEMENTS.				Trustees' Commissions.	Net amount paid into the State Treasury.
		Thirty cents per \$100 on original assessment of taxable property	Supplemental assessment by Trustees, and Penalty.	LAND SALES.			County Court Releases, including seal certificate.			
				State Tax	Adver- tising.					
McNairy.....	James L. Littlefield.....	\$3976 40	\$5 34	\$31 87	\$5 00	\$68 25	\$232 56	\$3644 06		
Madison.....	Z. N. Wright.....	11560 17	46 65	828 68	5 00	86 44	430 64	10256 06		
*Marion.....	John H. Farratt.....	3374 67	104 19	231 86				3325 99		
Marshall.....	A. B. Stilwell.....	8243 21	44 29	43 69	5 00	105 44	311 48	7821 89		
Maury.....	H. F. Farris.....	22067 55	193 83	693 03		134 81	700 85	20732 69		
Meigs.....	J. R. Moore.....	2738 42	11 77			11 42	164 28	2574 49		
Monroe.....	J. C. Warren.....	5789 61	24 73	30 03	5 00	25 23	345 24	5408 84		
Montgomery.....	Jno. S. Neblett.....	13525 27	14 47	191 28	5 00	367 50	470 99	12504 97		
*Moore.....	B. E. Spencer.....	1763 01	11 57	15 11	5 00	77		562 00		
*Morgan.....	John D. Kreis.....	1810 44	18 50	304 81		85 60		902 22		
Obion.....	Geo. P. Hurt.....	10701 24	28 37	103 88		220 17	524 41	9881 15		
Overton.....	J. J. Phillips.....	1920 45	4 96	11 70		72 56	110 46	1730 69		
Perry.....	J. P. Beasley.....	2497 06	20 85	19 80		40 57	147 42	2310 12		
Pickett.....	James Rector.....	767 64	12 52			14 84	45 90	719 42		
Polk.....	Isaac Nicholson.....	2437 46	14 65	1 32		19 04	145 86	2285 89		
Punam.....	J. M. Whitson.....	2852 19	9 00	29 52		75 63	165 36	2590 68		
Rhea.....	G. M. D. Spence.....	3300 56	50 00	28 48		79 96	194 52	3047 60		
*Roane.....	G. A. Guenther.....	6428 39	110 52	89 17		65 90		4483 35		
Robertson.....	G. P. Martin.....	8570 94	47 50	93 36		103 11	442 94	7979 03		
Rutherford.....	J. P. Hale.....	18221 32	133 54	484 32		110 80	696 15	17063 59		
*Scott.....	E. M. Sexton.....	1272 51	29 43	79 96				1209 76		
Squatchie.....	W. B. Elliott.....	825 60	3 42	22 15		16 87	47 40	742 60		

Sovier.....	4944 82	34 35	18 90	5 00	89 02	241 44	3929 31
*Shelby.....	57169 51	1805 04	6151 28	.....	1885 80	.....	49732 75
Smith.....	8700 84	33 30	14 55	.....	104 98	477 21	8137 40
Stewart.....	3042 15	43 48	30 15	5 00	45 24	180 30	2834 94
*Sullivan.....	6277 97	5 18	77 83	.....	124 77	.....	5181 19
Geo. R. Barnes.....	13410 83	35 82	768 96	10 00	682 60	378 72	11606 37
J. H. McLaren.....	6734 54	36 00	300 35	3 50	380 15	311 60	6774 94
Tipton.....	2740 14	16 77	3 90	5 00	8 80	164 34	2574 87
Trousdale.....	566 68	.....	17 70	.....	12 85	32 16	503 97
Unicoi.....	2136 29	5 92	5 44	.....	34 16	126 15	1978 46
John Bowman.....	704 03	8 01	15 37	.....	42 21	39 27	615 19
Van Buren.....	5057 67	38 70	.....	.....	47 60	302 88	4745 89
Warren.....	5087 22	.....	15 01	5 00	32 19	.....	3714 03
*Washington.....	3480 28	47 95	23 10	.....	107 94	203 82	3193 37
Wayne.....	8337 14	45 96	54 30	.....	53 35	443 54	7831 91
Weakley.....	3373 12	25 17	.....	5 00	106 19	197 22	3089 88
White.....	15394 35	182 26	156 31	.....	53 77	597 73	14768 80
S. M. Snodgrass.....	13942 33	16 26	121 20	.....	187 20	576 55	13073 54
B. T. Wilson.....	.....	.....	.....	.....	.....	.....	.....
L. N. M. Cook.....	.....	.....	.....	.....	.....	.....	.....
Total.....	\$667913 28	\$16685 92	\$19240 43	\$1 6 50	\$22947 90	\$21133 00	\$598995 66

*Accounts not closed, which results in this table being out of balance \$22,095.71.

S 1—TABULAR STATEMENT of amount and source of current revenue collected from the several Counties of the State from December 20, 1882, to December 19, 1883, inclusive.

COUNTIES.	Trustees. State Tax, 1882.	County Court Clerks.	Circuit Court Clerks, and redemptions.	Chancery Court Clerks.	Law Court Clerks.	Criminal Court Clerks.	Supreme Court Clerks.	Total.
Anderson.....	\$ 1913 36	\$ 986 36	\$ 44 77	\$ 41 45	.....	.....	.....	\$ 2985 92
Bedford.....	9002 09	2921 31	462 07	165 99	.....	.....	.....	12551 46
Benton.....	1647 64	840 47	107 52	46 20	.....	.....	.....	2641 83
Bledsoe.....	1162 19	318 25	98 64	83 05	.....	.....	.....	1607 13
Blount.....	3194 87	1266 30	61 03	152 82	.....	.....	.....	4675 02
Bradley.....	3663 82	2300 54	246 69	60 94	.....	.....	.....	6271 99
Campbell.....	1490 37	802 83	81 40	19 32	.....	.....	.....	2398 42
Cannon.....	2030 00	895 80	69 49	70 52	.....	.....	.....	3065 81
Carroll.....	4947 01	1418 63	72 90	114 57	.....	.....	.....	6553 11
Carter.....	1555 43	332 39	47 05	85 77	.....	.....	.....	2020 64
Cheatham.....	1658 34	507 33	73 12	.....	.....	.....	.....	2238 79
Chester.....	675 99	580 66	77 51	7 39	.....	.....	.....	1341 55
Claiborne.....	1735 28	415 56	45 86	43 52	.....	.....	.....	2240 22
Clay.....	1545 03	606 88	113 91	.....	.....	.....	.....	2265 82
Cocke.....	2531 80	1224 63	178 47	46 32	.....	.....	.....	3981 22
Coffee.....	2308 41	1406 88	153 74	102 37	.....	.....	.....	3971 40
Crockett.....	2943 35	2549 54	304 95	123 85	.....	.....	.....	5921 69
Cumberland.....	618 52	228 01	133 69	14 63	.....	.....	.....	1014 85
* Davidson.....	43605 86	67742 25	2437 76	21494 73	.....	\$5185 41	\$1667 45	142183 46
Decatur.....	1431 62	598 20	286 36	99 34	.....	.....	.....	2415 52
DeKalb.....	2897 10	1022 27	437 58	29 05	.....	.....	.....	4386 00
Dickson.....	1744 55	1188 48	160 61	21 94	.....	.....	.....	3115 58
Dyer.....	4457 94	5513 00	185 19	172 42	.....	.....	.....	10328 55
Fayette.....	5762 18	5102 92	444 94	136 52	.....	.....	.....	11446 56
Fentress.....	532 77	232 67	258 48	29 24	.....	.....	.....	1053 16

Franklin	2231 77	379 08	93 43	.....	.....	5892 50
Ibbon	4977 09	115 66	890 08	.....	.....	14031 17
Giles	5471 62	631 04	855 90	.....	.....	14775 14
Grainger	773 79	33 09	56 05	.....	.....	3239 04
Greene	2175 07	190 70	197 45	.....	.....	7403 26
Grundy	1037 44	29 87	26 44	.....	.....	3209 66
Hamblen	1534 17	201 04	121 87	.....	.....	4545 93
Hamilton	14237 16	808 61	482 63	.....	.....	27603 58
Hancock	453 45	97 52	60 97	.....	.....	1637 80
Hardeman	4901 08	319 56	75 58	.....	.....	10357 83
Hardin	506 40	116 87	84 72	.....	.....	3309 00
Hawkins	1744 30	15 13	135 56	.....	.....	5531 62
Hawood	2827 81	319 45	148 70	.....	.....	8372 09
Henderson	1757 70	172 91	67 67	.....	.....	5049 04
Henry	3083 64	172 63	152 83	.....	.....	7714 31
Hickman	1107 08	206 52	143 80	.....	.....	4476 40
Houston	637 77	123 35	53 61	.....	.....	1541 31
Humphreys	957 39	164 63	112 10	.....	.....	3226 99
Jackson	791 62	300 36	192 07	.....	.....	3203 59
James	213 13	375 58	63 38	.....	.....	1672 21
Jefferson	1201 03	127 79	268 15	.....	.....	5294 60
Johnson	219 58	39 54	24 05	.....	.....	1173 35
Knox	17388 48	259 51	259 36	.....	58 50	34821 66
Lake	643 05	272 00	.....	.....	.....	2314 71
Lauderdale	3197 82	338 10	407 98	.....	.....	7006 29
Lawrence	1272 81	81 78	53 62	.....	.....	8100 98
Lewis	103 26	93 34	16 84	.....	.....	662 74
Lincoln	2734 18	547 63	114 25	.....	.....	10210 87
Loudon	1310 20	47 86	46 32	.....	.....	3865 84
Macon	558 08	112 83	82 75	.....	.....	2308 75
McMinn	3527 97	144 15	156 24	.....	.....	4838 60
McNairy	2692 16	340 44	118 58	.....	.....	8950 78
Madison	5801 24	.....	190 13	.....	3917 95	16997 05
Marion	1281 74	367 84	62 99	.....	.....	3879 04
Marshall	1653 87	231 84	136 50	.....	.....	7228 59
Maurry	9426 14	303 96	542 28	.....	.....	24259 86
Meigs	423 07	51 47	75 04	.....	.....	2313 51

S 1—TABULAR STATEMENT of amount and source of current revenue collected from the several Counties of the State from December 20, 1882, to December 19, 1883, inclusive.—Continued.

COUNTIES.	Trustees. State Tax, 1882.	County Court Clerks.	Circuit Clerk, includ'g land redemptions.	Chancery Court Clerks.	Law Court Clerks.	Criminal Court Clerks.	Supreme Court Clerks.	Total.
Monroe	3562 62	1781 18	83 32	99 92	.....	.....	.....	5527 04
Montgomery	8226 06	5854 37	500 83	175 52	.....	286 88	.....	15043 66
Moore	1128 94	383 02	51 82	41 10	.....	.....	.....	1604 88
Morgan	844 45	735 40	288 98	9 75	.....	.....	.....	1878 58
Obion	6361 50	4555 13	631 18	249 24	211 02	.....	.....	12008 07
Overton	1138 78	782 92	334 40	31 70	.....	.....	.....	2387 80
Perry	1434 67	542 33	368 08	199 88	.....	.....	.....	2544 96
Pickett	455 94	93 25	104 10	31 70	.....	.....	.....	684 99
Polk	1512 68	499 18	73 71	44 50	.....	.....	.....	2130 07
Putnam	1783 16	583 59	125 03	56 10	.....	.....	.....	2547 88
Rhea	1836 94	326 98	124 70	33 93	.....	.....	.....	2322 55
Roane	4027 72	983 73	108 21	38 90	.....	.....	.....	5158 56
Robertson	5412 64	3396 70	121 32	71 87	.....	.....	.....	9002 53
Rutherford	11391 98	3948 72	550 45	348 60	.....	.....	.....	16239 75
Scott	848 61	1458 56	276 50	54 45	.....	.....	.....	2638 11
Sequatchie	466 96	139 36	25 28	.....	.....	.....	.....	631 60
Sevier	2646 21	883 26	136 51	44 00	.....	.....	.....	3659 98
Shelby	31148 11	61940 26	2209 33	1813 20	.....	1305 63	.....	98416 52
Smith	5426 43	1086 80	410 97	103 35	.....	.....	.....	7027 55
Stewart	1937 00	1014 36	73 50	19 07	.....	.....	.....	3043 93
Sullivan	3700 93	1811 42	151 99	147 37	.....	.....	.....	5811 71
Sumner	6997 52	1779 23	662 41	80 45	.....	.....	.....	9519 61
Tipton	3997 69	3940 04	391 18	143 83	.....	.....	.....	8472 74
Trousdale	1730 23	336 36	54 19	48 70	.....	.....	.....	2169 48
Union	328 48	79 18	.....	14 63	.....	.....	.....	422 29
VanBuren	1364 82	435 70	26 33	50 85	.....	.....	.....	1877 20
VanBuren	448 18	83 76	14 40	9 26	.....	.....	.....	565 59

Warren	3085 88	2133 63	182 94	109 70	.....	.....	.....	6512 16
Washington	3085 97	1233 19	49 73	75 56	.....	.....	.....	4444 45
Wayne	2110 52	1306 72	309 97	126 74	.....	.....	.....	3852 95
Weakley	5909 01	2755 00	128 43	89 57	.....	.....	.....	8882 01
White	2015 99	776 24	155 02	85 69	.....	.....	.....	3082 94
Williamson	9892 81	2886 80	101 71	214 40	.....	.....	.....	12845 72
Wilson	8909 17	2111 26	108 22	324 19	.....	.....	.....	11452 84
	\$401377 11	\$314102 05	\$23517 12	\$33669 51	\$655 84	\$6836 42	\$6672 33	\$786829 88

Total amount collected during the year 1882.....	\$354902 97
Total amount collected during the year 1883.....	786829 88
Decrease in 1883 compared with 1882.....	<u>\$168073 09</u>

COMPARED WITH THE YEAR 1882.

Total amount collected during the year 1882.....\$354902 97
 Total amount collected during the year 1883.....786829 88
 Decrease in 1883 compared with 1882.....\$168073 09

NOTE.—The State tax collected by Trustees in 1882 was the tax of 1881, which was thirty cents on the \$100, while the State tax collected in 1883 was that of 1882, which was only twenty cents on the \$100, hence the decrease as shown above.

*Of the amount collected by the Clerk of the Chancery Court of Davidson County, the sum of \$16,794 85 was collected from the Louisville & Nashville Railroad Company on account of back taxes due the State, as per judgment in the Chancery Court.

S 2—TABULAR STATEMENT of amount and source of Current Revenue collected from the several Counties of the State from December 20, 1883, to December 19, 1884, inclusive.

COUNTIES.	Trustees. State Tax, 1883.	County Court Clerks.	Circuit Court Clerks, in- cluding Land Redemptions.	Chancery Court Clerks.	Law Court Clerks.	Criminal Court Clerks.	Supreme Court Clerks.	TOTAL.
*Anderson.....	\$2907 10	\$824 90	\$50 00	\$29 10	.....	.....	.....	\$3911 10
Bedford.....	13541 51	2777 26	447 41	73 14	.....	.....	.....	16839 32
*Benton.....	1946 95	1272 77	67 28	43 90	.....	.....	.....	3330 90
Bledsoe.....	1733 68	287 63	42 66	28 85	.....	.....	.....	2092 82
Blount.....	4765 82	759 86	157 50	58 37	.....	.....	.....	5741 55
Bradley.....	5452 24	1480 84	170 06	51 21	.....	.....	.....	7154 35
Campbell.....	2305 52	915 74	36 52	19 11	.....	.....	.....	3276 89
*Cannon.....	3200 00	975 32	41 27	57 67	.....	.....	.....	4274 26
Carroll.....	7242 07	2105 23	69 77	143 80	.....	.....	.....	9560 87
Carters.....	2603 23	224 18	49 88	48 26	.....	.....	.....	2925 55
*Cheatham.....	2155 16	538 33	50 00	36 58	.....	.....	.....	2780 07
Chester.....	2402 54	539 68	108 60	16 81	.....	.....	.....	3067 63
*Claiborne.....	2508 01	589 68	25 40	62 83	.....	.....	.....	3185 92
*Clay.....	634 97	261 83	109 71	53 36	.....	.....	.....	1059 87
Cocke.....	3749 16	949 70	56 74	24 40	.....	.....	.....	4780 00
Coffee.....	3553 42	1115 24	861 35	58 60	.....	.....	.....	5083 61
Crockett.....	4304 56	2407 80	71 69	68 00	.....	.....	.....	6842 06
*Cumberland.....	906 65	279 62	141 98	33 64	.....	.....	.....	1361 89
†Davidson.....	73841 27	82316 62	3786 38	52208 71	.....	1834 58	4854 16	218841 72
Decatur.....	2157 18	584 54	208 73	79 00	.....	.....	.....	3029 45
DeKalb.....	4174 64	509 75	337 84	71 48	.....	.....	.....	5093 71
Dickson.....	2698 30	1019 63	116 83	1760 20	.....	.....	.....	5594 96
Dyer.....	7103 86	4396 59	340 42	143 77	.....	.....	.....	11954 64
Fayette.....	7809 17	5025 35	210 13	70 90	.....	.....	.....	13115 55
*Fentress.....	711 79	170 00	222 89	57 43	.....	.....	.....	1162 11
Franklin.....	4765 86	2076 69	232 34	129 30	.....	.....	.....	7203 69
*Gibson.....	11364 16	6410 06	1994 08	328 04	565 98	.....	.....	20662 31

S 2—TABULAR STATEMENT of amount and source of Current Revenue collected from the several Counties of the State from December 20, 1883, to December 19, 1884, inclusive.—Continued.

COUNTIES.	Trustees' State Tax, 1883.	County Court Clerks.	Circuit Court Clerks, including Land Redemptions.	Clantery Court Clerks.	Law Court Clerks.	Criminal Court Clerks.	Supreme Court Clerks.	TOTAL.
*Moore.....	\$562 00	\$476 58	\$77 00	\$14 57	.....	.....	.....	\$1190 15
*Morgan.....	902 22	720 68	157 15	.....	.....	.....	.....	1780 05
Obion.....	9881 15	5775 80	51 22	91 20	279 83	.....	.....	18079 20
Overton.....	1730 69	563 05	231 65	43 87	.....	.....	.....	2569 26
Perry.....	2310 12	647 45	395 38	56 07	.....	.....	.....	3409 02
Pickett.....	719 42	140 49	160 14	9 75	.....	.....	.....	1029 80
Polk.....	2285 89	532 60	85 30	52 98	.....	.....	.....	2956 77
Putnam.....	2590 68	409 15	83 10	72 18	.....	.....	.....	3175 11
Rhea.....	3047 60	568 91	117 48	28 34	.....	.....	.....	3762 33
*Roane.....	4483 35	1305 35	111 39	16 94	.....	.....	.....	5917 03
Robertson.....	7979 03	3014 90	222 92	85 33	.....	.....	.....	11302 18
Rutherford.....	17063 59	3999 59	1015 42	182 96	.....	.....	.....	22261 56
*Scott.....	1209 76	1117 78	207 09	33 58	.....	.....	.....	2568 21
Sevier.....	742 60	86 85	10 57	14 63	.....	.....	.....	854 65
*Shelby.....	3929 31	723 14	102 80	19 50	.....	.....	.....	4774 84
.....	49732 75	67386 36	1954 24	1623 87	.....	1261 19	.....	121958 41
Smith.....	8137 40	1101 64	139 93	52 41	.....	.....	.....	9431 38
*Stewart.....	2824 94	1392 76	636 95	29 76	.....	.....	.....	4884 41
*Sullivan.....	5181 19	1817 83	203 28	227 67	.....	.....	.....	7429 97
Sumner.....	11606 37	2248 98	456 26	92 59	.....	.....	.....	14404 20
Tipton.....	5774 94	2138 92	503 06	31 70	.....	.....	.....	8448 62
Troutdale.....	2574 87	325 11	67 23	31 45	.....	.....	.....	2998 66
Unicoi.....	503 97	82 20	14 61	7 16	.....	.....	.....	607 94
Union.....	1976 46	461 40	24 87	50 81	.....	.....	.....	2513 54
Van Buren.....	615 19	116 84	49 83	.....	.....	.....	.....	781 96
Warren.....	4745 89	1734 02	149 99	58 52	.....	.....	.....	6688 42
*Washington.....	3714 03	1743 55	46 81	126 75	.....	.....	.....	5631 14

Wayne	3193 87	1110 21	184 08	210 07	.....	.....	4697 68
Weakley	7831 91	2374 18	80 69	208 03	.....	.....	10503 81
White	3089 88	966 96	179 41	63 00	.....	.....	4299 25
Williamson.....	14768 80	2231 36	182 04	97 65	.....	.....	17279 85
Willson.....	13073 64	2946 04	163 32	191 57	.....	.....	16374 57
Total.....	\$59895 66	\$330470 31	\$24775 00	\$62933 59	\$1110 79	\$3450 73	\$8254 22
							\$1029990 30

COMPARED WITH THE YEAR 1883:

Total amount collected during the year 1883.....	\$ 786829 88
Total amount collected during the year 1884.....	1029990 30
Increase in 1884 over 1883.....	\$ 243160 42

*Accounts of Trustees for 1883 not closed.

†In collections of Clerk and Master of Davidson County, there is included \$50,713.84 collected from Louisville & Nashville R. R. Co. for Back Taxes.

S 2—TABULAR STATEMENT of amount and source of Current Revenue collected from the several Counties of the State from December 20, 1883, to December 19, 1884, inclusive.—Continued.

COUNTIES.	Trustees' State Tax, 1883.	County Court Clerks.	Circuit Court Clerks, including Land Redemptions.	Clancery Court Clerks.	Law Court Clerks.	Criminal Court Clerks.	Supreme Court Clerks.	TOTAL.
*Moore.....	\$562 00	\$476 58	\$77 00	\$14 57	.....	.....	.....	\$1130 15
*Morgan.....	902 22	720 68	157 15	.....	.....	.....	.....	1780 05
Obion.....	9881 15	5775 80	51 22	91 20	279 83	.....	.....	16079 20
Overton.....	1730 69	563 05	231 65	43 87	.....	.....	.....	2569 26
Perry.....	2310 12	647 45	395 38	56 07	.....	.....	.....	3409 02
Pickett.....	719 42	140 49	160 14	9 75	.....	.....	.....	1029 80
Polk.....	2285 89	532 60	85 30	52 98	.....	.....	.....	2956 77
Putnam.....	2590 68	409 15	83 10	72 18	.....	.....	.....	315 11
Rhea.....	3047 60	568 91	117 48	28 34	.....	.....	.....	3762 33
*Roane.....	4483 35	1305 35	111 39	16 94	.....	.....	.....	5917 03
Robertson.....	7979 03	3014 90	222 92	85 33	.....	.....	.....	11302 18
Rutherford.....	17063 59	3999 59	1015 42	182 96	.....	.....	.....	22281 56
*Scott.....	1209 76	1117 78	207 09	33 58	.....	.....	.....	2568 21
Sequatchie.....	742 60	86 85	10 57	14 63	.....	.....	.....	854 65
Seyler.....	3929 31	723 14	102 89	19 50	.....	.....	.....	4774 84
*Shelby.....	49732 75	67386 36	1954 24	1623 87	.....	1261 19	.....	121958 41
Smith.....	8137 40	1101 64	139 93	52 41	.....	.....	.....	9431 38
Stewart.....	2824 94	1392 76	636 95	29 76	.....	.....	.....	4884 41
*Sullivan.....	5181 19	1817 83	203 28	227 67	.....	.....	.....	7429 97
Sumner.....	11606 37	2248 98	456 26	92 59	.....	.....	.....	14404 20
Tipton.....	5774 94	2138 92	503 06	31 70	.....	.....	.....	8448 62
Trousdale.....	2574 87	325 11	67 23	31 45	.....	.....	.....	2998 66
Unicoi.....	82 20	82 20	14 61	7 16	.....	.....	.....	607 94
Union.....	1976 46	461 40	24 87	50 81	.....	.....	.....	2513 54
Van Buren.....	615 19	116 84	49 93	.....	.....	.....	.....	781 96
Warren.....	4745 89	1734 02	149 99	58 52	.....	.....	.....	6688 42
*Washington.....	3714 03	1743 55	46 81	126 75	.....	.....	.....	5631 14

Wayne.....	3193 37	1110 21	184 08	210 07	.....	.....	4997 68
Weakley.....	7831 91	2874 18	89 69	208 03	.....	.....	10503 81
White.....	3089 88	966 96	179 41	63 00	.....	.....	4299 25
Williamson.....	14768 80	2231 36	182 04	97 65	.....	.....	17279 85
Wilson.....	*18073 64	2946 04	163 32	191 57	.....	.....	16374 57
Total.....	\$598995 66	\$330470 31	\$24775 00	\$62933 59	\$1110 79	\$3450 73	\$8254 22
							\$1029990 30

COMPARED WITH THE YEAR 1883:

Total amount collected during the year 1883..... \$ 786829 88

Total amount collected during the year 1884..... 1029990 30

Increase in 1884 over 1883.....\$ 243160 42

*Accounts of Trustees for 1883 not closed.

†In collections of Clerk and Master of Davidson County, there is included \$50,713.84 collected from Louisville & Nashville R. R. Co. for Back Taxes.

T—TABULAR STATEMENT showing amount of warrants issued on account of the Arrest of Fugitives, from December 20, 1882, to December 19, 1884, inclusive, giving name of Fugitive, Crime committed, and by whom Reward was offered, etc.

DATE	NAME OF FUGITIVE	COUNTY	BY WHOM REWARD WAS OFFERED	PARTY RECEIVING REWARD	CRIME	AMOUNT PAID.
Jan. 23, 1883.	Sam Gentry	Maury	Alvin Hawkins.....	C. W. Irvine.....	Murder	\$ 250 00
Feb. 21, " "	M. T. Polk.....	Davidson	Alvin Hawkins.....	Jas. A. Warder, Atty	Embezzlement	9370 00
Feb. 21, " "	M. T. Polk.....	Davidson	Alvin Hawkins.....	R. M. Porter.....	Embezzlement	220 00
Feb. 21, " "	M. T. Polk.....	Davidson	Alvin Hawkins.....	R. M. Porter.....	Embezzlement	100 00
Feb. 21, " "	M. T. Polk.....	Davidson	Alvin Hawkins.....	Sam Fields.....	Embezzlement	100 00
Feb. 21, " "	M. T. Polk.....	Davidson	Alvin Hawkins.....	W. G. Pride.....	Embezzlement	100 00
March 24, " "	Geo. Head.....	Maury	Alvin Hawkins.....	R. M. Green.....	Murder	100 00
March 30, " "	Lucius Weaver.....	Knox.....	Albert S. Marks.....	Daniel Foster.....	Rape.....	250 00
April 7, " "	Geo. Bell.....	Rutherford	W. B. Bate.....	S. C. Odom	Murder.....	100 00
April 7, " "	H. Bell.....	Wenkley	No Reward, see Acts '83, p 324	W. J. Haggy	Horse-stealing.....	50 00
April 27, " "	Andrew Taylor.....	Landon.....	Alvin Hawkins.....	T. N. Dixon.....	Murder	68 66
June 5, " "	Wm. Henderson	Marion.....	Alvin Hawkins.....	N. W. Wilbur.....	Murder	200 00
July 20, " "	Harvey Tharpe.....	Henry	Alvin Hawkins.....	M. H. Freeman.....	Murder	100 00
Aug. 13, " "	Marion Boyett	Rutherford	W. B. Bate.....	W. G. Pride.....	Murder	100 00
Nov. 19, " "	P. Haley.....	Shelby	W. B. Bate.....	W. C. Davis.....	Murder	150 00
March 10, 1884.	John Mathea.....	Henry	Alvin Hawkins.....	M. H. Freeman.....	Murder	250 00
April 10, " "	Jack Hickman	Maury	W. B. Bate, § 5340-102 of Code.	W. O. Witherspoon	Horse-stealing.....	175 75
April 10, " "	L. Ware.....	Blount	W. B. Bate, § 5340-102 of Code.	W. W. Freshour.....	Murder	157 10
April 10, " "	Jas. Taylor, alias	Shelby	W. B. Bate, § 5340-102 of Code.	Wm. Price.....	Forgery.....	92 50
April 15, " "	Wm. Smith.....	Greene	W. B. Bate, § 5340-102 of Code.	F. R. Robinson	Murder	64 64
May 2, " "	Sam Smith.....	Warren	Alvin Hawkins.....	G. H. Pettigreed.....	Murder	200 00
May 5, " "	W. N. Wilson, et al	Rutherford	Alvin Hawkins.....	S. C. Odom	Liberat'g fel. pris.....	250 00
June 21, " "	B. E. Norman.....	Davidson	W. B. Bate, § 5340-102 of Code.	Simon Klein.....	Seduction.....	28 85

Aug. 6, 1884...	I. Bankton.....	Shelby	W. B. Bate, § 5340-102 of Code. G. T. O'Harer.....	Cohab't'g with negro.	68 80
Aug. 25, " ..	Geo. Hartsell.....	Sovier	W. B. Bate.....	Murder	100 00
Oct. 28, " ..	E. J. Smith.....	Grundy	W. B. Bate, § 5340-102 of Code. J. B. Drake	Arson	214 00
Nov. 26, " ..	Warren Bishop.....	Dickson	W. B. Bate, § 5340-102 of Code. J. T. Hickerson	Murder	138 25
Dec. 9, " ..	A. Maus.....	Shelby	W. B. Bate, § 5340-102 of Code. G. T. O'Harer.....	Obt. mon. by false p.	68 95
Dec. 9, " ..	F. A. Frazier.....	Greene	W. B. Bate, § 5340-102 of Code. J. R. Hoard	Felonious assault ...	72 45
Dec. 9, " ..	J. S. Laws.....	Johnson	W. B. Bate.....	Murder.....	200 00
Total					\$13937 95

U 1—TABULAR STATEMENT showing the amount paid to each County, on account of Criminal Prosecutions, from December 20, 1882, to December 19, 1883, arranged according to Judicial Circuits.

FIRST JUDICIAL CIRCUIT.					
Judges. NEWTON HACKER.			Att'ys-Gen'l. JNO. FAIN.		
COUNTIES.	Fees of Clerks and other Officers, in- cluding Witness Fees.	District Attorneys General.	Jail Fees.	Boarding Jurors.	TOTAL.
Carter.....	\$ 657 99	\$75 00	\$292 40	\$145 00	\$ 1170 39
Greene.....	1251 17	90 00	204 20	15 00	1560 37
Hancock.....	275 66	42 00	122 60	37 50	477 76
Hawkins.....	1025 17	69 00	326 60	60 00	1480 77
Johnson.....	61 95	9 00	58 20	.....	130 15
Sullivan.....	523 93	53 50	361 20	115 00	1053 63
Unicoi.....	112 64	33 00	4 80	5 00	155 44
Washington.....	798 38	114 00	374 60	140 00	1426 98
Total.....	\$4706 89	\$485 50	\$1745 60	\$517 50	\$7455 49

SECOND JUDICIAL CIRCUIT.					
JAS. S. ROSE.			A. S. TATE.		
Olaiborne.....	584 71	54 00	154 20	25 00	817 91
Cooke.....	1739 48	168 00	1318 00	.....	\$225 48
Grainger.....	173 52	3 00	295 40	73 50	545 52
Hamblen.....	586 36	174 00	921 80	175 00	1857 16
Jefferson.....	794 60	63 00	219 40	115 00	1132 00
Sevier.....	445 81	54 00	639 60	50 00	1189 44
Union.....	757 22	21 00	92 00	70 00	940 22
Total.....	\$5021 83	\$537 00	\$3640 40	\$508 50	\$9707 73

THIRD JUDICIAL CIRCUIT.					
S. A. ROGERS.			M. L. McCONNELL.		
Blount.....	524 14	35 00	577 60	26 25	1162 99
Loudon.....	341 50	53 00	1723 20	200 00	2317 90
Monroe.....	782 06	46 00	317 60	310 00	1455 66
Roane.....	711 16	25 00	350 40	.....	1086 56
Total.....	\$2358 86	\$159 00	\$2969 00	\$536 25	\$6023 11

U 1—TABULAR STATEMENT showing the amount paid to each County
on account of Criminal Prosecutions—Continued.

FOURTH JUDICIAL CIRCUIT.					
Judges.			Attys-Gen'l.		
D. C. TREWHITT.			A. L. SPEARS.		
COUNTIES.	Fees of Clerks and other Officers, in- cluding Witness Fees.	District Attorneys General.	Jail Fees.	Boarding Jurors.	TOTAL.
Bledsoe	\$ 142 50	\$ 5 00	.....	.....	\$ 147 50
Bradley	722 08	115 00	690 00	75 00	1602 08
Hamilton	2227 91	530 00	4589 60	112 50	7460 01
James	703 92	83 00	80 60	37 50	906 62
McMinn	451 11	60 00	634 60	247 50	1393 21
Marion	286 45	66 00	188 20	22 50	563 15
Meigs	1042 34	19 00	292 20	26 25	1379 79
Polk	122 08	10 00	67 60	28 12	227 80
Rhea	228 32	20 00	414 20	48 75	711 27
Sequestrie	182 52	13 00	4 00	.....	199 52
Total	\$6109 23	\$921 00	\$6961 00	\$598 12	\$14589 35

FIFTH JUDICIAL CIRCUIT.					
W. W. McCONNELL.			H. C. SNODGRASS.		
Clay	554 77	26 00	.....	28 00	608 77
DeKalb	262 41	26 00	338 60	22 00	649 01
Jackson	1395 91	127 00	128 80	89 00	1660 71
Macon	690 59	33 00	385 80	90 00	1199 39
Putnam	3476 63	104 00	269 80	162 33	4016 76
Smith	673 77	19 00	71 20	19 00	782 97
Trousdale	477 30	38 00	433 00	120 00	1068 30
White	1975 88	69 00	355 20	158 75	2558 83
Total	\$9417 26	\$446 00	\$1982 40	\$689 08	\$12534 74

SIXTH JUDICIAL CIRCUIT.					
J. J. WILLIAMS.			A. B. WOODARD.		
Coffee	\$ 441 13	\$ 47 00	\$239 40	\$102 50	\$ 830 03
Franklin	425 65	188 00	792 40	572 50	1978 55
Grundy	195 38	36 00	48 60	.....	279 98
Lincoln	1519 01	198 00	699 40	271 25	2687 66
Moore	221 75	44 00	56 00	.....	321 75
Van Buren	62 43	9 00	.....	.....	71 43
Warren	858 62	92 00	490 20	155 00	1595 82
Total	\$3723 97	\$614 00	\$2326 00	\$1101 25	\$7765 22

SEVENTH JUDICIAL CIRCUIT.					
ROBT. CANTRELL.			LILLARD THOMPSON.		
Bedford	1222 57	279 00	1790 90	120 00	3412 47
Cannon	1331 36	11 00	145 20	15 00	1502 50
Wilson	262 21	43 00	32 00	5 00	342 21
Total	\$2816 08	\$333 00	\$1968 10	\$140 00	\$5257 18

**U 1—TABULAR STATEMENT showing the amount paid to each County
on account of Criminal Prosecutions—Continued.**

EIGHTH JUDICIAL CIRCUIT.

Judges.
M. W. ALLEN.

Attys-Gen'l.
W. H. WASHINGTON.

COUNTIES,	Fees of Clerks and other Officers, in- cluding Witness Fees.	District Attorneys General,	Jail Fees,	Boarding Jurors.	TOTAL.
Davidson	\$8262 90	\$1522 00	\$6082 40	\$2941 25	\$18808 55
Rutherford	916 73	248 00	1195 89	330 00	2720 53
Total	\$9209 63	\$1770 00	\$7278 20	\$3271 25	\$2159 08

NINTH JUDICIAL CIRCUIT.

W. S. McLEMORE.

J. H. FUSSELL.

Giles	755 04	127 00	525 60	5 00	1412 64
Lawrence	467 57	88 00	183 20	10 00	748 77
Marshall	598 10	68 00	1285 20	136 25	2087 55
Maury	3159 03	284 00	3472 00	375 00	7290 03
Williamson	1692 76	132 00	721 40	235 00	2781 16
Total	\$6672 50	\$699 00	\$6187 40	\$761 25	\$14320 15

TENTH JUDICIAL CIRCUIT.

JO. C. STARK.

B. D. BELL.

Cheatham	7 00	.....	30 40	.....	37 40
Dickson	381 46	33 00	222 20	79 80	716 46
Humphreys	60 86	6 00	279 60	31 50	377 96
Robertson	451 72	64 00	332 00	90 00	937 72
Stewart	210 95	86 00	186 20	12 50	495 65
Sumner	1900 44	104 50	1084 70	224 50	3314 14
Total	\$3012 43	\$293 50	\$2135 10	\$438 30	\$5679 33

ELEVENTH JUDICIAL CIRCUIT.

T. P. BATEMAN.

M. H. MEEKS.

Chester	58 76	12 50	.....	.....	71 26
Decatur	486 69	17 00	18 00	11 25	532 91
Hardin	484 62	12 00	21 60	5 00	533 22
Henderson	113 50	35 00	164 40	15 00	327 90
Hickman	37 84	3 00	301 40	45 00	387 24
Lewis	22 35	5 00	.....	5 00	32 35
McNairy	291 44	63 00	529 20	145 00	828 64
Perry	11 30	.....	.....	.....	11 30
Wayne	323 82	45 00	192 00	38 75	599 57
Total	\$1830 29	\$192 50	\$1026 60	\$265 00	\$3314 39

**U 1—TABULAR STATEMENT showing the amount paid to each County
on account of Criminal Prosecutions—Continued.**

TWELFTH JUDICIAL CIRCUIT.

Judge. **Atty-Gen'l.**
CLINTON ADEN. **W. H. SWIGERT.**

COUNTIES.	Fees of Clerks and other Officers, in- cluding Witness Fees.	District Attorneys General.	Jail Fees.	Boarding Jurors.	TOTAL.
Benton	\$239 50	\$ 35 00	\$275 00	\$ 68 75	\$ 618 27
Carroll	657 91	62 00	208 41	.....	928 31
Henry	452 23	61 00	797 60	369 50	1690 33
Lake	17 15	30 00	79 60	13 00	139 75
Obion	718 47	133 00	992 00	39 00	1882 47
Weakley	686 64	53 00	688 60	318 50	1727 74
Total	\$2771 92	\$374 00	\$3022 20	\$808 75	\$6976 87

THIRTEENTH JUDICIAL CIRCUIT.

J. T. CARTEL. **D. O. THOMAS.**

Crockett	286 20	66 00	440 40	20 00	812 60
Dyer	314 19	52 50	426 00	20 83	813 52
Gibson	1517 31	197 00	1133 80	222 45	3070 56
Haywood	832 03	287 00	990 80	61 98	2161 81
Madison	1269 87	336 00	1496 00	.....	3071 87
Total	\$4219 60	\$938 50	\$4417 00	\$325 26	\$9930 36

FOURTEENTH JUDICIAL CIRCUIT.

T. J. FLIPPEN. **J. J. DUPUY.**

Payette	595 52	48 00	565 40	102 50	1311 42
Hardeman	1391 86	208 00	587 40	96 25	2283 51
Lauderdale	846 73	112 00	649 00	97 00	1745 23
Tipton	627 89	106 00	1064 40	55 00	1853 29
Total	\$3522 00	\$174 00	\$2866 20	\$351 25	\$7213 45

FIFTEENTH JUDICIAL CIRCUIT.

(Shelby County.)

Memphis Court, J. M. GREEN. **G. P. M. TURNER.**
Bartlett Court, T. D. ELDRIDGE.

Memphis	11417 16	2349 50	3572 60	544 00	17883 26
Bartlett	540 91	104 00	928 60	30 00	1603 51
Total	\$11958 07	\$2453 50	\$4501 20	\$374 00	\$19486 77

**U 1—TABULAR STATEMENT showing the amount paid to each County
on account of Criminal Prosecutions—Continued.**

SIXTEENTH JUDICIAL CIRCUIT.

Judges. D. K. YOUNG.		Attys-Gen'l. J. M. D. MITCHELL.			
COUNTIES.	Fees of Clerks and other Officers, in- cluding Witness Fees.	District Attorneys General.	Jail Fees.	Boarding Jurors.	TOTAL.
Anderson.....	\$784 98	\$63 00	\$95 20	\$46 00	\$989 18
Campbell.....	1195 64	113 00	329 00	61 75	1699 39
Cumberland.....	17 25	.....	37 00	21 00	75 25
Fentress.....	226 81	43 00	163 00	51 00	483 84
Morgan.....	402 36	47 00	94 20	24 00	567 56
Overton.....	1016 35	69 00	411 00	106 00	1604 35
Pickett.....	104 62	9 00	.....	.....	113 62
Scott.....	286 85	54 00	213 80	41 25	595 90
Total.....	\$4034 84	\$398 00	\$1343 20	\$351 00	\$6127 04

C. W. TYLER.		R. H. BURNBY.			
Montgomery.....	2252 72	315 50	2107 40	255 00	4930 62
Houston.....	148 63	46 00	.....	40 50	235 03
Total.....	\$2401 25	\$361 50	\$2107 40	\$295 50	\$5165 65

M. L. HALL.		D. D. ANDERSON.			
Knox.....	6862 02	806 00	2779 00	615 00	11062 02

SUPREME COURTS.

Fees of Clerks, Witnesses, et al., East Tennessee.....	\$2432 44
Fees of Clerks, Witnesses, et al., Middle Tennessee.....	5304 95
Fees of Clerks, Witnesses, et al., West Tennessee.....	2158 72
Total.....	\$9896 11

RECAPITULATION.

Fees of Clerks, Witnesses, et al.....	\$90648 67
Fees of District Attorneys-General.....	12256 00
Jail Fees.....	59286 00
Boarding Juries.....	12147 26
Total.....	\$184234 04

U 2—**TABULAR STATEMENT** showing the amount paid to each County on account of Criminal Prosecutions, from December 20, 1883, to December 19, 1884, arranged according to Judicial Circuits.

FIRST JUDICIAL CIRCUIT.

Judges.
NEWTON HACKER.

Attys-Gen'l.
JOHN FAIN.

COUNTIES.	Fees of Clerks and other Officers, including Witness Fees.	District Attorneys General.	Jail Fees.	Boarding Jurors.	TOTAL.
Carter	\$311 75	\$ 40 00	\$ 70 20	\$ 65 00	\$486 95
Greene	498 13	57 00	758 80	235 00	1548 93
Hancock	387 50	27 00	71 60	45 00	531 10
Hawkins	2082 71	162 00	248 80	190 00	2683 51
Johnson .....	.....	.....	423 60	70 00	493 60
Sullivan	480 78	64 00	363 20	38 20	945 78
Union	91 69	.....	43 80	.....	135 49
Washington	611 84	79 00	728 30	150 00	1598 64
Total	\$4493 60	\$429 00	\$2708 30	\$793 20	\$8424 00

SECOND JUDICIAL CIRCUIT.

JAS. G. ROSE.

ALLEN S. TATE.

Claiborne	886 65	34 00	183 40	85 00	1191 05
Coke	489 64	18 00	320 00	90 00	917 64
Granger	393 88	11 00	860 60	40 00	895 48
Hamblen	611 36	77 00	1038 20	213 07	1939 63
Jefferson	240 84	37 00	431 80	110 00	819 14
Sevier	576 70	93 00	794 20	125 00	1588 90
Union	418 81	11 00	24 60	40 00	494 41
Total	\$3617 88	\$283 00	\$3152 30	\$703 07	\$7766 25

THIRD JUDICIAL CIRCUIT.

S. A. ROGERS.

M. L. McCONNELL.

Blount	545 64	97 00	826 80	52 00	1521 44
Landon	232 10	39 00	6109 60	.....	6380 70
Monroe	549 38	49 00	85 40	60 00	743 73
Ronne	2993 54	156 00	249 60	207 25	3605 39
Total	\$4320 61	\$340 00	\$7271 40	\$319 25	\$12251 29

**U 2—TABULAR STATEMENT showing the amount paid to each County
on account of Criminal Prosecutions—Continued.**

FOURTH JUDICIAL CIRCUIT.

Judges.		Attys-Gen'l.			
D. C. TREWHITT.		A. L. SPEARS.			
COUNTIES.	Fees of Clerks and other Officers, in- cluding Witness Fees.	District Attorneys General.	Jail Fees.	Boarding Jurors.	TOTAL.
Bledsoe.....	\$ 99 53	\$ 8 00	\$ 6 80	.....	\$114 35
Bradley.....	767 55	118 00	286 40	116 55	1288 30
Hamilton.....	4269 88	891 00	5040 40	215 38	10416 66
James.....	383 92	11 50	113 40	11 25	520 07
McMinn.....	2325 20	73 00	375 80	73 75	2847 75
Marion.....	1660 57	96 00	207 20	283 25	2247 02
Meigs.....	89 52	8 00	142 20	7 50	197 22
Polk.....	290 06	31 00	99 80	5 00	335 86
Rhea.....	393 16	58 00	369 80	.....	820 96
Sequatchie.....	51 85	10 00	50 00	.....	111 85
Total.....	\$10191 26	\$1304 50	\$6691 80	\$712 48	\$18900 04

FIFTH JUDICIAL CIRCUIT.

N. W. McCONNELL.		G. B. MURRAY.			
COUNTIES.	Fees of Clerks and other Officers, in- cluding Witness Fees.	District Attorneys General.	Jail Fees.	Boarding Jurors.	TOTAL.
Clay.....	242 97	14 00	.....	4 00	260 97
DeKalb.....	438 68	58 00	158 20	44 00	698 88
Jackson.....	1194 40	50 00	.....	201 00	1445 40
Macon.....	280 39	34 00	13 20	12 00	339 59
Putnam.....	250 42	49 00	121 80	43 00	464 22
Smith.....	320 68	69 00	403 20	.....	782 28
Trousdale.....	88 62	15 00	99 60	4 00	207 22
White.....	350 68	37 00	373 20	47 00	807 88
Total.....	\$3161 24	\$316 00	\$1169 20	\$356 00	\$5001 44

SIXTH JUDICIAL CIRCUIT.

J. J. WILLIAMS.		A. B. WOODARD.			
COUNTIES.	Fees of Clerks and other Officers, in- cluding Witness Fees.	District Attorneys General.	Jail Fees.	Boarding Jurors.	TOTAL.
Coffee.....	177 42	30 00	103 80	70 00	381 22
Franklin.....	1250 87	139 00	673 00	45 00	2107 87
Grundy.....	174 17	23 00	11 20	78 90	287 27
Lincoln.....	1408 42	204 00	656 40	175 00	2443 42
Moore.....	192 11	32 00	265 60	10 00	499 71
VanBuren.....	.....	2 50	63 05	80 00	85 55
Warren.....	516 84	78 00	215 60	20 10	830 44
Total.....	\$3719 83	\$508 50	\$1988 25	\$428 90	\$6645 48

SEVENTH JUDICIAL CIRCUIT.

ROBERT CANTRELL.		LILLARD THOMPSON.			
COUNTIES.	Fees of Clerks and other Officers, in- cluding Witness Fees.	District Attorneys General.	Jail Fees.	Boarding Jurors.	TOTAL.
Bedford.....	445 55	137 00	545 60	.....	1128 15
Cannon.....	789 68	26 00	96 80	30 00	942 48
Wilson.....	140 15	61 00	248 00	5 00	454 15
Total.....	\$1375 38	\$224 00	\$890 40	\$35 00	\$2524 78

**U 2—TABULAR STATEMENT showing the amount paid to each County
on account of Criminal Prosecutions—Continued.**

EIGHTH JUDICIAL CIRCUIT.

Judges.
MATT. W. ALLEN.

Attys-Gen'l.
W. H. WASHINGTON.

COUNTIES.	Fees of Clerks and other Officers in- cluding Witness Fees.	District Attorneys General.	Jail Fees.	Boarding Jurors.	TOTAL.
Davidson	\$7960 01	\$1669 00	\$5213 40	\$2755 00	\$17597 41
Rutherford	904 03	216 00	1321 60	342 50	2784 13
Total	\$8864 04	\$1885 00	\$6535 00	\$3097 50	\$20581 54

NINTH JUDICIAL CIRCUIT.

WM. S. McLEMORE.

J. H. FUSSELL.

Giles.....	805 78	216 00	1284 00	100 00	2405 76
Lawrence.....	393 09	71 00	90 60	.....	554 69
Marshall.....	444 07	68 50	1557 80	347 50	2417 87
Mauzy.....	3117 92	34 00	2912 00	336 25	6719 17
Williamson.....	976 60	139 00	664 60	65 00	1845 20
Total.....	\$5737 44	\$837 50	\$6509 00	\$848 75	\$13332 69

TENTH JUDICIAL CIRCUIT.

J. C. STARK.

B. D. BELL.

Cheatham.....	108 36	43 00	167 20	30 00	348 54
Dickson.....	283 34	34 00	284 80	36 00	642 14
Humphreys.....	151 20	38 00	496 40	54 00	739 60
Robertson.....	500 91	70 00	377 80	97 50	1046 21
Stewart.....	363 55	68 00	231 20	30 00	695 75
Sumner.....	521 05	150 00	420 40	.....	1091 45
Total.....	\$1928 41	\$403 00	\$1984 80	\$247 50	\$4563 71

ELEVENTH JUDICIAL CIRCUIT.

T. P. BATEMAN.

M. H. MEESKES.

Chester.....	67 84	27 00	.....	.....	94 84
Decatur.....	38 40	9 00	.....	5 00	52 40
Hardin.....	14 25	3 00	.....	.....	17 25
Henderson.....	122 73	18 00	100 00	.....	240 73
Hickman.....	169 65	20 00	438 40	142 80	770 55
Lewis.....	.....	.....	.....	.....	.....
McNairy.....	256 53	27 00	293 60	175 00	754 13
Perry.....	25 00	6 00	.....	.....	31 00
Wayne.....	194 78	27 00	115 60	.....	335 38
Total.....	\$388 88	\$137 00	\$947 60	\$322 50	\$2296 98

**U 2—TABULAR STATEMENT showing the amount paid to each County
on account of Criminal Prosecutions—Continued.**

TWELFTH JUDICIAL CIRCUIT.

Judges.		Attys-Gen'l.			
CLINTON ADEN.		J. E. JONES.			
COUNTIES.	Fees of Clerks and other Officers, in- cluding Witness Fees.	District Attorneys General.	Jail Fees.	Boarding Jurors.	TOTAL.
Benton.....	\$ 515 47	\$ 36 00	\$560 40	\$123 50	\$1235 37
Carroll.....	282 99	43 00	358 80	53 00	737 79
Henry.....	1293 64	56 00	702 60	310 85	2358 09
Lake.....	83 55	21 00	13 80	.....	118 35
Obion.....	409 68	15 00	586 20	29 25	1180 13
Weakley.....	1265 39	130 00	236 00	175 50	1806 83
Total.....	\$3855 66	\$421 00	\$2457 80	\$392 10	\$7426 56

THIRTEENTH JUDICIAL CIRCUIT.

JOHN P. CARTEL.		D. O. THOMAS.			
Crockett.....	346 08	61 00	372 00	43 33	825 41
Dyer.....	513 77	134 00	473 80	164 65	1286 22
Gibson.....	1186 31	196 00	669 00	169 65	2219 96
Haywood.....	726 62	126 00	566 40	60 66	1479 68
Madison.....	1219 34	164 00	1741 40	194 40	3319 14
Total.....	\$3992 12	\$684 00	\$3821 60	\$632 69	\$9130 41

FOURTEENTH JUDICIAL CIRCUIT.

T. J. FLIPPIN.		J. J. DUPUY.			
Fayette.....	1154 78	108 50	650 20	160 00	2073 48
Hamden.....	1130 51	182 00	700 00	80 00	2092 51
Lauderdale.....	639 69	108 00	662 60	90 00	1500 26
Tipton.....	1116 26	174 00	535 20	235 00	2060 46
Total.....	\$4041 23	\$572 50	\$2548 00	\$365 00	\$7726 73

FIFTEENTH JUDICIAL CIRCUIT.

(Shelby County.)

A. H. DOUGLAS, Memphis Court.		G. P. M. TURNER.			
T. D. ELDRIDGE, Bartlett Court.					
Memphis.....	11223 94	2691 00	4388 00	787 00	19289 94
Bartlett.....	1022 35	171 00	848 80	316 00	2358 15
Total.....	\$12246 29	\$2862 00	\$5236 80	\$1103 00	\$21448 09

**U 2—TABULAR STATEMENT showing the amount paid to each County
on account of Criminal Prosecutions—Continued.**

SIXTEENTH JUDICIAL CIRCUIT.

Judges.
D. K. YOUNG.

Attys-Gen'l.
H. B. LINDSAY.

COUNTIES.	Fees of Clerks and other Officers, in- cluding Witness Fees.	District Attorneys General.	Jail Fees.	Boarding Jprors.	TOTAL.
Anderson.....	731 95	56 00	29 80	3 00	820 75
Campbell.....	1142 55	91 00	247 80	16 00	1497 35
Cumberland.....	38 26	5 00	13 00		56 26
Fentress.....	579 12	33 00	218 60	51 25	881 97
Morgan.....	734 83	65 00	168 00	21 75	989 58
Overton.....	1455 87	53 50	110 00	81 00	1700 37
Pickett.....	163 15	10 00	63 60	38 25	275 00
Scott.....	619 39	70 00	327 00	96 00	1111 39
Total.....	\$5465 12	\$383 50	\$1177 80	\$806 25	\$7332 67

C. W. TYLER.

R. H. BURNEY.

Montgomery.....	1732 39	415 00	2521 00	390 00	5058 39
Houston.....	583 03	60 00	296 40	84 00	1023 43
Total.....	\$2315 42	\$475 00	\$2817 40	\$474 00	\$6081 82

M. L. HALL.

D. D. ANDERSON.

Knox.....	12945 91	1542 00	4016 40	1055 00	19559 31
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SUPREME COURTS.

Fees of Clerks and other Officers, East Tennessee.....	\$4019 40
Fees of Clerks and other Officers, Middle Tennessee.....	6843 45
Fees of Clerks and other Officers, West Tennessee.....	2662 02
Total.....	\$13524 87

RECAPITULATION.

Fees of Clerks, Witnesses, et al.....	\$93160 22
Fees of District Attorneys-General.....	13607 50
Jail Fees.....	61923 85
Boarding Jurors.....	12691 19
Total.....	\$181382 76

V—TABULAR STATEMENT showing the amounts reported due by delinquents December 19, 1882, and what disposition, if any, has been made of each account since that date.

County.	Parties' Names.	Office.	Year.	Delinquency D.c. 19, 1882.	Payments, Abatements, etc.	REMARKS.
Benton.....	D. A. Bruce.....	County Court Clerk.....	1874, 5-6	\$2709 08	\$255 00	In attorney's hands.
Benton.....	Jus. G. Hudson.....	Trustee.....	1881	361 29	250 00	In attorney's hands.
Bladock.....	Thos. Hall.....	Trustee.....	1881	187 30	187 30	
Blount.....	J. C. Edmundson.....	Revenue Collector.....	1869	7449 36	.....	No bond, reported worthless.
Bradley.....	J. B. Newton.....	Revenue Collector.....	1867	91 38	.....
Bradley.....	J. H. Rucker.....	County Court Clerk.....	1881	417 42	417 42	
Carier.....	N. G. Hyder.....	Revenue Collector.....	1875	1033 95	.....	In attorney's hands.
Carier.....	N. G. Hyder.....	Trustee.....	1877	287 75	.....	In attorney's hands.
Carroll.....	Thos. C. White.....	Trustee.....	1880	262 33	.....
Carroll.....	E. Falkner.....	County Court Clerk.....	1882	87 02	87 02	
Cheatham.....	R. Weakley.....	Trustee.....	1881	361 08	361 08	
*Cheatham.....	J. N. Ozburne.....	Circuit Court Clerk.....	1882	7 21	.....
Claiborne.....	J. N. Ford.....	Revenue Collector.....	1867	44 86	.....
Claiborne.....	F. L. McVey.....	Revenue Collector.....	1870	363 14	.....
Claiborne.....	F. L. McVey.....	Revenue Collector.....	1871	641 64	.....
Claiborne.....	C. B. White.....	Trustee.....	1881	532 70	.....	In attorney's hands.
Clay.....	H. G. Tinsley.....	Revenue Collector.....	1873	521 44	.....
Clay.....	J. E. Hampton.....	Trustee.....	1881	163 14	163 14	
Cocke.....	W. H. Wood.....	County Court Clerk.....	1867	12 28	.....
Cocke.....	Joel Ben.....	Revenue Collector.....	1868	494 61	.....	Enjoined in Chancery Court.
Cocke.....	Allen M. Stokely.....	Trustee.....	1881	732 64	732 64	
Coffee.....	R. W. Casey.....	Revenue Collector.....	1868	1998 23	.....
Coffee.....	D. W. Tucker.....	Revenue Collector.....	1869	7470 31	.....
Coffee.....	D. McLain.....	Circuit Court Clerk.....	1869	62 50	.....
Cumberland.....	W. C. Baker.....	Trustee.....	1879	68 26	.....	In attorney's hands.
*Cumberland.....	Z. H. Gass.....	Revenue Collector.....	1872-3	1370 34	.....	In attorney's hands.
Cumberland.....	J. P. Hamby.....	Trustee.....	1876	210 57	.....	Judgt's Execut'n returned nulla bona.
Davidson.....	P. L. Nichol.....	County Court Clerk.....	1870	1303 73	.....	In attorney's hands.

Decatur.....	J. C. Barrett.....	1865	60 00	.....	Dead—no bond.
DeKalb.....	W. S. Parker.....	1865	587 28	.....
DeKalb.....	T. N. Christian.....	1882	4 96	.....
Dickson.....	J. C. Donegan.....	1872-3	8335 01	1857 00	In attorney's hands—lands sold.
Dyer.....	W. B. Biggs.....	1870	95 06	.....
Dyer.....	S. A. Williams.....	1879	151 85	78 08	
Fentress.....	S. Hinds.....	1878	4 76	.....
Fentress.....	O. P. Cooper.....	1881	86 76	86 76	
Franklin.....	J. G. Enocks.....	1871	836 81	.....
Gibson.....	C. A. Moore.....	1865	82 23	.....
Gibson.....	R. H. Burnes.....	1869	2249 13	.....	Sureties insolvent.
Gibson.....	James E. Wood.....	1869	154 01	.....
Granger.....	Thos. Latham.....	1876	140 00	.....
Greene.....	David Fry.....	1865	6533 24	.....	Sureties released, 8th Heiskell, 388.
Greene.....	Jno. W. Ellis.....	1873	3300 79	.....	Awaiting sale of land.
Grundy.....	G. W. Lane.....	1867	720 16	.....	Judgment being settled.
Grundy.....	George Meyers.....	1869	1702 52	.....
Grundy.....	R. B. Roberts.....	1881	14 62	.....	In attorney's hands.
Hamblen.....	James Leftwick.....	1872	189 46	.....
Hamilton.....	R. A. Hunter.....	1866	338 35	.....	Lands bid in by State, in attorney's hands.
Hamilton.....	R. A. Hunter.....	1867	2028 13	.....
Hamilton.....	R. A. Hunter.....	1868	6971 72	.....	Judgment in attorney's hands.
Hamilton.....	R. A. Hunter.....	1869	6555 00	.....	Judgment in attorney's hands.
Hamilton.....	R. H. Guthrie.....	1869	4792 86	.....	Sureties released, 8th Heiskell, 388.
Hamilton.....	W. H. Bean.....	1870	587 24	.....
Hamilton.....	W. H. Bean.....	1871	5308 52	204 30	Judgment in attorney's hands.
Hancock.....	Jesse Alden.....	1865	1067 83	.....	Judgment in attorney's hands.
Hancock.....	J. F. Nichols.....	1869	219 14	.....
Hardeman.....	J. I. Simpson.....	1874	3811 96	.....	Judgment.
Hardin.....	E. T. McGee.....	1866-7	2705 33	200 00	
Hawkins.....	J. M. Sizemore.....	1865	2181 33	.....	In Chancery Court.
Hawkins.....	C. H. Bailes.....	1866-7	7863 43	300 00	Lands bid in by State.
Hawkins.....	James Lackey.....	1868-9	50 55	.....
Hawkins.....	Wm. Allen.....	1869	135 18	.....
Hawkins.....	P. H. Starnes.....	1875	3691 66	.....
Hawkins.....	Geo. Webb.....	1881	2117 60	.....
Haywood.....	Robt. Medlin.....	1875	967 99	630 50	

V—TABULAR STATEMENT showing the amounts reported due by delinquents December 19, 1882.—Continued.

County.	Parties' Names.	Office.	Year.	Delinquency Dec. 19, 1882.	Payments, Abatements, etc.	REMARKS.
Houston.....	R. C. Rushing.....	Trustee.....	1881	\$973 45	\$973 45	Judgment Supreme Court worthless.
Humphreys..	W. P. R. Batson.....	Revenue Collector.....	1867	1110 69	.....
Humphreys..	S. H. Spann.....	Revenue Collector.....	1869	2185 38	.....	Being settled by compromise.
Jackson.....	F. M. Price.....	Revenue Collector.....	1869	1427 21	.....	Being settled by compromise.
Jackson.....	F. M. Price.....	Revenue Collector.....	1870	828 68	.....	Being settled by compromise.
Jackson.....	F. M. Price.....	Revenue Collector.....	1871	4195 31	.....
Jackson.....	W. S. Johnson.....	Revenue Collector.....	1874	1314 37	1314 37	
Jefferson....	R. E. Newman.....	Revenue Collector.....	1875	1369 32	.....
Jefferson....	Daniel Thornton.....	Trustee.....	1880	118 98	118 98	
Jefferson....	A. C. Crosswaite.....	Revenue Collector.....	1881	344 16	344 16	
Johnson.....	A. C. Crosswaite.....	Revenue Collector.....	1870	1326 01	.....	Judgment Supreme Court.
Johnson.....	J. F. Shown.....	Revenue Collector.....	1871	744 49	.....	Judgment Supreme Court.
Johnson.....	J. C. Donnelly.....	Revenue Collector.....	1873	642 22	.....
Johnson.....	{ J. C. Donnelly.....	Trustee.....	1877	47 93	.....
Johnson.....	{ and R. L. Wilson.....	County Court Clerk.....	1875-8	78 01	.....
Knox.....	R. H. Butler.....	Circuit Court Clerk.....	1867	24 77	.....
Knox.....	W. B. McBeth.....	County Court Clerk.....	1877	717 02	717 02	{ Suit ordered to be dismissed by State's Attorney General.
Lauderdale..	J. F. J. Lewis.....	Revenue Collector.....	1865	15 43	.....	Judgment reported worthless.
Lauderdale..	E. W. Lewis.....	Revenue Collector.....	1872	4472 83	.....	Judgment reported worthless.
Lauderdale..	W. B. Pillow.....	Revenue Collector.....	1873	4842 69	.....
Lawrence....	W. B. Pillow.....	Revenue Collector.....	1867	1278 73	.....
Lawrence....	T. M. Scott.....	Revenue Collector.....	1868	626 83	.....
Lawrence....	T. M. Scott.....	Revenue Collector.....	1871	1038 70	1038 70	
Lawrence....	Samuel Weaver.....	Revenue Collector.....	1872	2781 75	2781 75	
Lewis.....	Samuel Weaver.....	Revenue Collector.....	1867	400 79	.....	Enjoined in Chancery Court.
Lewis.....	M. D. Brown.....	Revenue Collector.....	1881	168 46	168 46	
Lewis.....	R. Downey.....	Circuit Court Clerk.....	1871	905 46	.....	Judgment—not all paid.
Macon.....	M. A. Freeman.....	Revenue Collector.....	1876	572 75	.....	In attorney's hands.
Marshall.....	H. N. Cowden.....	Clerk and Master.....	1876	1659 37	.....
Maury.....	W. C. Allen.....	Revenue Collector.....	1865	.....	.....

V—TABULAR STATEMENT showing the amounts reported due by delinquents December 19, 1882.—Continued.

County.	Parties' Names.	Office.	Year.	Delinquency Dec. 19, 1882.	Payments, Abatements, etc.	REMARKS.
Shelby	Phillip Garvin	Revenue Collector.	1867	87288 53	.....
Shelby	E. P. Ware	County Court Clerk	1866	2225 29	.....
Shelby	Geo. B. Fleeca	Trustee	1879	4467 64	3663 05	
Smith	George Beale	Revenue Collector.	1871	536 96	.....
Sullivan	W. C. Snapp	County Court Clerk	1865	404 14	.....
Sullivan	G. L. Yates	County Court Clerk	1866-7	24 29	.....
Sullivan	John Roller	Revenue Collector.	1866	1319 55	.....
Sullivan	John Roller	Revenue Collector.	1867	6830 91	.....
Sullivan	A. C. Shipley	Revenue Collector.	1869	2930 75	.....
Sullivan	R. P. Eanes	Trustee	1879	633 12	.....
Sullivan	Geo. L. Clay	Circuit Court Clerk.	1882	21 68	.....
Sumner	Wm. Equals	Revenue Collector.	1867	5409 55	.....
Tipton	B. F. Locke	Trustee	1881	588 79	588 79	
Union	C. M. Baker	Trustee	1877	59 73	.....
VanBuren	A. L. Parker	County Court Clerk	1882	2 18	.....
Washington	I. A. Branscom	Revenue Collector.	1871	5800 16	.....
Washington	I. A. Branscom	Revenue Collector.	1872	11221 87	.....
Wayne	J. M. Morrow	Trustee	1877	803 90	25 00	
Wayne	P. H. Craig	Clerk and Master	1882	92 62	92 62	
Weakley	W. H. Carlton	Revenue Collector.	1868-9	12972 68	326 52	
Weakley	J. M. Finch	County Court Clerk	1882	1 00	.....
White	J. H. Cameron	Revenue Collector.	1868	896 86	.....
White	L. B. Rose	Revenue Collector.	1869	4035 70	.....
White	Peter Turney	Revenue Collector.	1871	255 94	.....
White	P. B. Franks	Clerk and Master	1872-3	2775 54	.....
White	C. D. England	Trustee	1880	394 36	394 36	
White	C. D. England	Trustee	1881	2942 28	2942 28	
Williamson	Henry Potts	Revenue Collector.	1865	843 17	.....
Wilson	A. Y. Armstrong	Revenue Collector.	1869	4507 96	59 00	
Wilson	L. N. M. Cook	Trustee	1881	4560 01	4560 01	
Total amount due				\$347918 92		

} Lands bid in by Attorney-General
Hacker for State.

In attorney's hands.

W—TABULAR STATEMENT showing amounts due by delinquents December 19, 1884.

County.	Name.	Year.	Trustee.	Revenue Collector.	County Court Clerk.	Circuit Court Clerk.	Chan'y Court Clerk.	Supreme Court Clerk.	Total.
Benton	D. A. Bruce.....	'74 5 6			\$2454 08				\$ 2454 08
Benton	Jas. G. Hudson....	1881	\$ 611 29						611 29
Bledsoe	J. R. Howard.....	1882			3 reports.				
Blount	J. E. Edmondson..	1869		\$ 7449 36					7449 36
Bradley	J. B. Newton.....	1867		91 38					91 38
Bradley	J. H. Rucker.....	1884			3 reports.				
Bradley	J. H. Rucker.....	1884			378 73				378 73
Cannon	E. J. Lorraine.....	1882	284 31						284 31
Carroll	E. Falkner.....	1884			811 86				811 86
Carroll	E. Falkner.....	1884			8 reports.				
Carter	N. G. Hyder.....	1875		1043 95					1043 95
Carter	N. G. Hyder.....	1877	287 75						287 75
Carter	Thos. C. White....	1880	252 33						252 33
Cheatham	Jno. J. Lea.....	1884					4 rep'ts.		
Cheatham	J. N. Ozburn	1882			\$ 7 21				7 21
Claiborne....	J. N. Ford.....	1867		44 86					44 86
Claiborne....	F. L. McVey	1870		363 14					363 14
Claiborne....	F. L. McVey	1871		641 64					641 64
Claiborne....	C. B. White	1881	230 77						230 77

Clay	1873	.....	521 44	.....	.....	.....	.....	.....	521 44
Cocke	1867	.....	.....	.....	.....	.....	.....	.....	12 28
Cooke	1868	.....	494 61	.....	.....	.....	.....	.....	494 61
Coffee	1868	.....	1998 23	.....	.....	.....	.....	.....	1998 23
Coffee	1869	.....	7470 31	.....	.....	.....	.....	.....	7470 31
Coffee	1869	.....	.....	.....	.....	.....	.....	.....	62 50
Cumberland	1879	68 26	.....	.....	.....	.....	.....	.....	68 26
Cumberland	1872-3	.....	1370 34	.....	.....	.....	.....	.....	1370 34
Cumberland	1876	210 57	.....	.....	.....	.....	.....	.....	210 57
Davidson	1870	.....	.....	.....	.....	.....	.....	.....	1303 73
Deatur	1865	.....	60 00	.....	.....	.....	.....	.....	60 00
DeKalb	1865	.....	587 23	.....	.....	.....	.....	.....	587 23
DeKalb	1882	.....	.....	.....	.....	.....	.....	.....	.....
DeKalb	1882	.....	.....	.....	.....	.....	.....	.....	.....
Dickson	1872-3	.....	.....	.....	.....	.....	.....	.....	.....
Dyer	1870	.....	6478 01	.....	.....	.....	.....	.....	6478 01
Dyer	1879	.....	95 06	.....	.....	.....	.....	.....	95 06
Fentress	1878	.....	.....	.....	.....	.....	.....	.....	73 77
Franklin	1871	.....	.....	.....	.....	.....	.....	.....	.....
Gibson	1865	.....	82 23	.....	.....	.....	.....	.....	836 81
Gibson	1869	.....	2249 13	.....	.....	.....	.....	.....	82 23
Gibson	1879	.....	.....	.....	.....	.....	.....	.....	2249 13
Grainger	1876	.....	.....	.....	.....	.....	.....	.....	154 01
Greene	1865	.....	.....	.....	.....	.....	.....	.....	154 01
Greene	1873	.....	6533 24	.....	.....	.....	.....	.....	140 00
Greene	1880	.....	3300 79	.....	.....	.....	.....	.....	6533 24
Grundy	1867	.....	.....	.....	.....	.....	.....	.....	3300 79
Grundy	1869	.....	720 16	.....	.....	.....	.....	.....	720 16
Grundy	1869	.....	1702 52	.....	.....	.....	.....	.....	1702 52

W—TABULAR STATEMENT showing amounts due by delinquents December 19, 1884—Continued.

County,	Name.	Year.	Trustee.	Revenue Collector.	County Court Clerk.	Circuit Court Clerk.	Chan'y Court Clerk.	Supreme Court Clerk.	Total.
Grundy	Jno. Scruggs.....	1880	.....	.....	2 reports.	.....	.....	.....	.....
Grundy	R. B. Roberts.....	1881	.....	.....	.....	.....	14 62	.....	14 62
Grundy	J. P. Somers.....	1880	.....	.....	.....	.....	1 rep't	.....	.....
Hamblen ..	James Lettwick...	1872	.....	.....	189 46	.....	.....	.....	189 46
Hamilton....	R. A. Hunter.....	1866	.....	338 35	.....	.....	.....	.....	338 35
Hamilton....	R. A. Hunter.....	1867	.....	2028 13	.....	.....	.....	.....	2028 13
Hamilton....	R. A. Hunter.....	1868	.....	6971 72	.....	.....	.....	.....	6971 72
Hamilton....	R. A. Hunter.....	1869	.....	6555 00	.....	.....	.....	.....	6555 00
Hamilton....	R. H. Guthrie.....	1869	.....	.....	4792 86	.....	.....	.....	4792 86
Hamilton....	W. H. Bean.....	1870	.....	587 24	.....	.....	.....	.....	587 24
Hamilton....	W. H. Bean.....	1871	.....	5004 22	.....	.....	.....	.....	5004 22
Hancock ..	Jesse Alden.....	1865	.....	1067 83	.....	.....	.....	.....	1067 83
Hancock ..	J. P. Nichols.....	1869	.....	219 14	.....	.....	.....	.....	219 14
Hardeman ..	J. I. Simpson	1874	.....	3811 96	.....	.....	.....	.....	3811 96
Hardin.....	E. T. McGhee.....	1866-7	.....	2505 33	.....	.....	.....	.....	2505 33
Hawkins ..	C. M. Bailes	1873	.....	.....	.....	.....	.....	.....	.....
Hawkins ..	J. M. Sizemore....	1865	.....	2181 33	.....	.....	.....	.....	2181 33
Hawkins ..	C. H. Bailes	1866-7	.....	7563 43	.....	.....	3 rep'ts	.....	7563 43
Hawkins ..	James Lackey.....	1868-9	.....	.....	50 55	.....	.....	.....	50 55
Hawkins ..	Wm. Allen	1869	.....	135 18	.....	.....	.....	.....	135 18
Hawkins ..	P. H. Starnes	1875	.....	3691 66	.....	.....	.....	.....	3691 66

Hawkins	Geo. Webb.....	1881	2117 60	.....	.....	.....	.....	.....	2117 60
Haywood.....	Robt. Medlin.....	1875	.....	.....	.....	337 49	.....	.....	337 49
Houston.....	J. T. Allman.....	1876	.....	.....	.....	.....	.....	.....	.....
Humphreys..	W. P. R. Batson...	1867	.....	.....	.....	.....	.....	.....	1110 69
Humphreys..	S. H. Spann.....	1869	.....	.....	.....	.....	.....	.....	2185 38
Jackson.....	F. M. Price.....	1869	.....	.....	.....	.....	.....	.....	1427 21
Jackson.....	F. M. Price.....	1870	.....	.....	.....	.....	.....	.....	828 68
Jackson.....	F. M. Price.....	1871	.....	.....	.....	.....	.....	.....	4195 31
Jefferson ..	R. E. Newman....	1875	.....	.....	.....	.....	.....	.....	1369 32
Johnson.....	A. C. Crosswaite...	1871	.....	.....	.....	.....	.....	.....	1326 01
Johnson.....	A. C. Crosswaite...	1872	.....	.....	.....	.....	.....	.....	744 49
Johnson.....	J. F. Shown.....	1873	.....	.....	.....	.....	.....	.....	642 22
Johnson.....	J. C. Donelly and R. L. Wilson....	1877	47 93	.....	.....	.....	.....	.....	47 93
Johnson.....	R. H. Butler.....	1875-8	.....	.....	.....	78 01	.....	.....	78 01
Johnson.....	R. H. Butler.....	1875-8	.....	.....	.....	Reporta.	.....	.....	.....
Knox.....	W. R. McBeth....	1867	.....	.....	.....	.....	24 77	.....	24 77
Lauderdale..	R. W. Lewis.....	1865	.....	.....	.....	.....	.....	.....	15 43
Lauderdale..	W. B. Pillow.....	1872	.....	.....	.....	.....	.....	.....	4472 83
Lauderdale..	W. B. Pillow.....	1873	.....	.....	.....	.....	.....	.....	4842 69
Lawrence....	T. M. Scott.....	1867	.....	.....	.....	.....	.....	.....	1278 73
Lawrence....	T. M. Scott.....	1868	.....	.....	.....	.....	.....	.....	626 83
Lawrence....	T. L. Bentley....	1884	.....	.....	.....	.....	4 rep'ts	.....	.....
Lewis.....	M. D. Brown.....	1867	.....	.....	.....	.....	.....	.....	536 96
Loudon.....	Elbert Kerr.....	1884	.....	.....	.....	.....	3 rep'ts	.....	.....
Macon.....	M. A. Freeman...	1871	.....	.....	.....	.....	.....	.....	905 46
Madison.....	Jno. H. Freeman..	1883	.....	.....	.....	.....	.....	1829 27	1829 27
Madison.....	D. P. Davis.....	1883	.....	.....	.....	.....	.....	128 00	128 00

W—TABULAR STATEMENT showing amounts due by delinquents December 19, 1884—Continued.

County.	Name.	Year.	Trustee.	Revenue Collector.	County Court Clerk.	Circuit Court Clerk.	Chan'y Court Clerk.	Supreme Court Clerk.	Total.
Madison.....	D. M. Wisdom.....	1881	.....	.....	.....	.....	5 rep'ts	.....	.....
Marshall	H. N. Cowden.....	1876	.....	.....	.....	.....	316 23	.....	316 23
Maury.....	W. C. Allen.....	1865	..	1659 37	.....	.....	.....	.....	1659 37
Meigs.....	A. P. Rowden.....	1867	.....	.....	321 46	.....	.....	.....	321 46
Meigs.....	J. F. Guinn	1870	.....	331 20	.....	.....	.....	.....	331 20
Montgomery	J. F. Fletcher... ..	1866	.....	1493 99	.....	.....	.....	.....	1493 99
Montgomery	G. C. Breed.....	1866	.....	.....	.....	104 82	.....	.....	104 82
Montgomery	J. R. Martin.....	1867	.....	3085 63	.....	.....	.....	.....	3085 63
Montgomery	A. T. Smith ..	1872	.....	4669 81	.....	.....	.....	.....	4669 81
Moore	E. Y. Salmon ..	1880	.....	.....	.....	.....	2 rep'ts	.....	.....
Moore	I. A. Norman ..	1880	.....	.....	.....	2 rep'ts	.....	.....	.....
McMinn	A. H. Wilson	1869	.....	763 51	.....	.....	.....	.....	763 51
McNairy.....	J. L. W. Boatman.	1867	.....	1355 65	.....	.....	.....	.....	1355 65
McNairy.....	John Kerley	1869	.....	4756 37	.....	.....	.....	.....	4756 37
McNairy.....	C. Schull	1870-8	.....	.....	2099 89	.....	.....	.....	2099 89
Morgan.....	Wm. Howard.....	1879	83 11	.....	.....	.....	.....	.....	83 11
Overton.....	R. C. Hill.....	1875	.....	602 28	.....	.....	.....	.....	602 28
Perry	T. J. Evans.....	1879	.....	.....	.....	36 13	.....	.....	36 13
Putnam.....	J. W. Thomas.....	1868	.....	22 11	.....	.....	.....	.....	22 11
Putnam.....	J. W. Thomas.....	1869	.....	379 83	.....	.....	.....	.....	379 83
Putnam.....	W. N. Gentry.....	1881	501 68	.....	.....	.....	.....	.....	501 68

County.	Name.	Year.	Trustee.	Revenue Collector.	County Court Clerk.	Circuit Court Clerk.	Chan'y Court Clerk.	Supreme Court Clerk.	Total.
Weakley	W. H. Carlton	1868-9	.....	12646 16	.....	.....	.....	.....	12646 16
Weakley	J. M. Finch.....	1882	.....	.....	1 00	.....	.....	.....	1 00
White	J. H. Cameron.....	1868	.....	896 86	.....	.....	.....	.....	896 86
White	L. B. Rose.....	1869	.....	4035 70	.....	.....	.....	.....	4035 70
White.....	Peter Turney	1871	.....	.....	.....	255 94	.....	.....	255 94
White.....	P. B. Franks.....	1872-3	.....	2775 54	.....	.....	.....	.....	2775 54
Williamson ..	Henry Potts.....	1865	.....	843 17	.....	.....	.....	.....	843 17
Wilson	A. Y. Armstrong..	1869	.....	4448 96	.....	.....	.....	.....	4448 96
Wilson	J. F. Coe.....	1880	.....	.....	7 reports	.....	.....	.....	.....
Total. ....	.....	.....	6971 94	289191 05	16785 90	830 92	605 32	1957 27	316342 40

W—TABULAR STATEMENT *showing amounts due by delinquents*
December 19, 1884—Continued.

Trustees.....	\$ 6,971 94
Revenue Collectors	289,191 05
County Court Clerks.....	16,785 90
Circuit Court Clerks.....	830 92
Chancery Court Clerks.....	605 32
Supreme Court Clerks.....	1,957 27—\$316,342 40 ✓
1865.....	\$ 14,967 30
1866.....	11,491 67
1867.....	122,508 28
1868.....	23,664 81
1869.....	51,768 27
1870.....	5,608 94
1871.....	19,502 50
1872.....	31,922 35
1873.....	9,307 14
1874.....	6,266 04
1875.....	8,237 78
1876.....	666 80
1877.....	1,174 31
1878.....	4 76
1879.....	1,698 98
1880.....	252 33
1881.....	3,475 96
1882.....	676 32
1883.....	1,957 27
1884... ..	1,190 59

\$316,342 40

Total amount due by delinquents Dec. 19, 1882.....\$347,918 92

Total amount due by delinquents Dec. 19, 1884..... 316,342 40

Reduction since Dec. 19, 1882\$ 31,576 52

X—INTEREST SCHOOL FUND—Tabular Statement showing the semi annual apportionment among the several Counties of the State, according to scholastic population, for the years 1883 and 1884.

COUNTIES.	1883.			1884.		
	April.	October.	Total.	April.	October.	Total.
Anderson	\$523 77	\$548 15	\$1071 92	\$599 65	\$546 20	\$1145 85
Bedford	1079 64	1129 88	2209 52	1248 55	1137 27	2385 82
Benton	281 17	294 26	575 43	476 55	434 07	910 62
Bledsoe	260 03	272 12	532 15	281 91	256 77	538 68
Blount	719 59	753 08	1472 67	772 82	703 94	1476 76
Bradley	548 40	573 93	1122 33	623 55	567 97	1191 52
Campbell	545 43	570 84	1116 27	599 65	546 20	1145 85
Cannon	538 65	564 03	1102 68	604 07	550 23	1154 30
Carroll	968 92	1011 93	1978 85	1057 67	963 40	2021 07
Carters	503 12	526 54	1029 66	578 44	526 88	1105 32
Cheatham	342 02	357 93	699 95	373 72	340 42	714 14
Chester .....	.....	.....	.....	362 45	330 15	692 60
Claiborne	618 57	647 36	1265 93	667 44	607 95	1275 39
Clay	303 32	317 44	620 76	343 79	313 15	656 94
Cocke	653 03	683 43	1336 46	708 37	645 25	1353 62
Coffee	626 41	655 56	1281 97	662 74	603 67	1266 41
Crockett	608 25	636 55	1244 80	707 71	644 63	1352 34
Cumberland	245 84	257 28	503 12	251 29	228 89	480 18
Davidson	342 14	358 74	701 88	383 79	349 19	732 98
Decatur	389 41	407 53	796 94	441 52	402 17	843 69
DeKalb	687 99	720 04	1408 03	748 12	681 43	1429 55
Dickson	570 43	596 97	1167 40	636 16	579 46	1215 62
Dyer	742 73	777 30	1520 03	816 72	743 92	1560 64
Fayette	1272 85	1332 09	2604 94	1050 15	956 55	2006 70
Fentress	213 49	223 43	436 92	212 24	193 32	405 56
Franklin	752 81	788 89	1542 70	783 96	714 08	1498 04

Gibson.....	1491 07	1560 48	3051 53	1686 72	1536 38	9223 10
Giles.....	1019 96	1695 35	3315 31	1704 07	1553 02	9257 99
Grainger.....	531 11	555 83	1086 94	601 13	547 55	1148 68
Greene.....	1100 05	1151 23	2251 28	1231 25	1121 50	2352 75
Grundy.....	256 41	268 34	524 75	278 82	263 96	532 78
Hamblen.....	934 30	481 62	941 82	528 89	479 92	1006 81
Hamilton.....	422 25	977 81	1912 14	1134 86	1033 72	2168 58
Hancock.....	988 69	441 94	864 19	458 57	417 69	876 26
Hardman.....	718 61	1034 74	2023 43	1082 88	986 27	2069 15
Hardin.....	917 53	752 01	1470 65	838 59	763 85	1602 44
Hawkins.....	1086 86	960 24	1877 77	1051 09	957 42	2008 51
Haywood.....	785 53	1137 44	2224 30	1137 14	1035 79	2172 93
Henlerson.....	959 46	822 09	1607 62	648 92	591 07	1239 99
Henry.....	568 19	1004 12	1963 58	1030 02	938 22	1968 24
Hickman.....	178 16	594 63	1162 82	647 83	590 09	1237 92
Houston.....	498 76	186 44	364 60	197 87	180 23	378 10
Humphreys.....	530 12	521 98	1020 74	540 85	492 65	1033 50
Jack-on.....	214 87	554 79	1084 91	571 99	521 02	1093 01
James.....	753 43	324 86	439 73	236 39	215 32	451 71
Jefferson.....	371 87	788 49	1541 92	811 35	739 04	1550 39
Johnson.....	1402 98	389 17	761 04	408 75	372 32	781 07
Knox.....	151 66	1468 27	2871 25	1930 89	1758 80	3689 69
Lake.....	626 04	158 72	310 38	166 33	151 49	317 82
Launderdale.....	440 66	655 18	1281 22	748 25	681 56	1429 81
Lawrence.....	103 01	461 18	9 11 84	484 74	441 53	926 27
Lewis.....	1185 39	107 84	210 85	106 05	96 59	202 64
Lincoln.....	378 83	1240 56	2425 95	1272 46	1180 05	2431 51
Loudon.....	407 07	396 46	775 29	408 63	372 20	780 83
Macon.....	1328 96	426 02	833 09	464 47	887 54	887 54
Madison.....	467 41	1390 84	2719 80	1353 81	1233 15	2506 96
Marion.....	815 89	489 17	956 58	520 05	473 69	903 74
Marshall.....	1798 74	83 86	1669 71	897 93	817 89	171 82
Mauzy.....	748 46	182 45	3681 19	1958 95	1784 35	3743 30
McMinn.....	817 13	783 29	1531 75	790 27	719 83	1510 10
McNairy.....	218 96	855 16	1672 24	761 81	693 92	1455 73
Meigs.....	656 77	312 83	631 53	334 53	301 70	639 23
Monroe.....		687 33	1341 81	708 92	645 74	1354 66

X—INTEREST SCHOOL FUND—Tabular Statement showing the semi annual apportionment among the several Counties of the State, according to scholastic population, for the years 1883 and 1884.

COUNTIES.	1883.			1884.		
	April.	October.	Total.	April.	October.	Total.
Anderson	\$523 77	\$548 15	\$1071 92	\$599 65	\$546 20	\$1145 85
Bedford	1079 64	1129 88	2209 52	1248 55	1137 27	2385 82
Benton	281 17	294 26	575 43	476 55	434 07	910 62
Bledsoe	260 03	272 12	532 15	281 91	256 77	538 68
Blount	719 59	753 08	1472 67	772 82	703 94	1476 76
Bradley	548 40	573 93	1122 33	623 55	567 97	1191 52
Campbell	545 43	570 84	1116 27	599 65	546 20	1145 85
Cannon	538 95	564 03	1102 98	604 07	550 23	1154 30
Carroll	966 92	1011 93	1978 85	1057 67	963 40	2021 07
Carter	503 12	526 54	1029 66	578 44	526 88	1105 32
Cheatham	342 02	357 93	699 95	373 72	340 42	714 14
Chester .....	.....	.....	.....	362 45	330 15	692 60
Claiborne	618 57	647 36	1265 93	667 44	607 95	1275 39
Clay	303 32	317 44	620 76	343 79	313 15	656 94
Cocke	653 03	683 43	1336 46	708 37	645 25	1353 62
Coffee	626 41	655 56	1281 97	662 74	603 67	1266 41
Crockett	608 25	636 55	1244 80	707 71	644 63	1352 34
Cumberland	245 84	257 28	503 12	251 29	228 89	480 18
Davidson	3429 14	3588 74	7017 88	3832 79	3491 19	7323 98
Decatur	389 41	407 53	796 94	441 52	402 17	843 69
DeKalb	687 99	720 04	1408 03	748 12	681 43	1429 55
Dickson	570 43	596 97	1167 40	636 16	579 46	1215 62
Dyer	742 73	777 30	1520 03	816 72	743 92	1560 64
Fayette	1272 85	1332 09	2604 94	1050 15	956 55	2006 70
Fentress	213 49	223 43	436 92	212 24	193 32	405 56
Franklin	752 81	788 89	1541 70	783 86	714 08	1498 04

Gibson.....	1491 07	1560 46	3051 53	1686 72	1536 38	8223 10
Giles.....	1619 96	1695 35	3315 31	1704 97	1553 02	8257 99
Grainger.....	531 11	555 83	1086 94	601 13	547 55	1148 68
Greene.....	1100 05	1151 93	2251 28	1231 50	1121 50	2352 76
Grundy.....	256 41	268 34	524 75	278 82	121 96	532 78
Hamblen.....	460 20	481 62	941 82	528 89	479 92	1006 81
Hamilton.....	934 33	977 81	1912 14	1134 86	1033 72	2168 58
Hancock.....	422 25	441 94	864 19	458 57	417 69	876 26
Hardeman.....	988 69	1034 74	2023 43	1082 88	988 27	2069 15
Hardin.....	718 61	752 01	1470 65	838 59	763 56	1602 44
Hawkins.....	917 53	960 24	1877 77	1051 09	957 42	2008 51
Haywood.....	1086 86	1137 44	2234 30	1137 14	1035 79	2172 93
Henderson.....	959 46	822 09	1607 62	648 92	591 07	1239 99
Henry.....	568 19	1004 12	1963 58	1030 02	938 22	1968 24
Hickman.....	178 16	594 63	1162 82	647 83	590 09	1237 92
Houston.....	498 76	186 44	364 60	197 87	180 23	378 10
Humphreys.....	530 12	521 98	1020 74	540 85	492 65	1033 50
Jack-son.....	214 87	554 79	1084 91	571 09	521 02	1093 01
James.....	733 43	324 86	439 73	236 39	215 32	451 71
Jefferson.....	371 87	788 49	1541 92	811 35	739 04	1650 39
Johnson.....	1402 98	389 17	761 04	408 75	372 32	781 07
Knox.....	151 66	1468 27	2871 25	1930 89	1758 80	3689 69
Lake.....	626 04	158 72	310 38	166 33	151 49	317 82
Lauderdale.....	440 66	655 18	1281 22	748 25	681 56	1429 81
Lawrence.....	103 01	461 18	91 81	484 74	441 53	926 27
Lewis.....	1185 39	107 84	210 87	106 05	96 59	202 64
Lincoln.....	378 83	1240 56	2425 95	1272 46	1159 03	2431 51
Loudon.....	407 07	396 46	775 29	408 63	372 20	780 83
Macon.....	1328 96	426 02	833 09	464 47	372 07	887 54
Madison.....	467 41	1390 81	2719 80	1353 81	1233 15	2556 96
Marion.....	815 89	489 17	956 58	520 05	473 69	993 74
Marshall.....	1798 74	853 86	1669 77	897 93	817 89	171 82
Mauzy.....	748 46	182 45	3681 19	1958 95	1784 35	3743 30
McMinn.....	817 13	783 29	1531 75	790 27	719 83	1510 10
McNairy.....	218 96	855 16	1672 24	761 81	693 92	1455 73
Meigs.....	656 77	312 88	611 84	334 53	301 70	639 23
Monroe.....		687 33	1344 10	708 92	645 74	1354 66

X—INTEREST SCHOOL FUND—Tabular Statement showing the semi-annual apportionment among the several Counties of the State, according to scholastic population, for the years 1883 and 1884—Continued.

COUNTIES.	1883.			1884.		
	April.	October.	Total.	April.	October.	Total.
Montgomery.....	\$1152 42	\$1206 06	\$2358 48	\$1268 69	\$1155 62	\$2424 31
Moore.....	280 18	293 22	573 40	294 53	268 27	562 80
Morgan.....	252 18	263 92	516 10	294 79	268 52	563 31
Obion.....	1028 38	1076 25	2104 63	1249 89	1138 50	2388 39
Overton.....	506 60	530 19	1036 79	478 97	435 27	915 24
Ferry.....	342 01	357 93	699 94	365 67	333 07	698 74
Pickett.....	185 87	194 53	380 40	208 08	189 52	397 60
Polk.....	328 94	344 26	673 20	374 53	341 15	715 68
Putnam.....	558 61	584 61	1143 22	589 31	536 79	1126 10
Rhea.....	352 33	368 73	721 06	411 98	375 27	787 25
Robertson.....	807 68	845 27	1652 95	774 56	705 52	1480 08
Rutherford.....	1654 18	1731 16	3385 34	850 27	774 48	1624 75
Scott.....	338 90	354 67	693 57	1832 09	1668 80	3500 89
Sequatchie.....	120 55	126 17	246 72	360 84	328 67	689 51
Sevier.....	741 74	776 26	1518 00	129 81	118 24	248 05
Shelby.....	3401 27	3659 17	6960 44	820 88	747 72	1568 60
Smith.....	781 67	818 06	1599 73	3792 93	3454 89	7247 82
Stewart.....	566 69	593 06	1159 75	823 56	750 16	1573 71
Sullivan.....	786 28	822 88	1609 16	622 87	567 35	1190 22
Sumner.....	1035 47	1083 67	2119 14	908 27	827 82	1736 59
Tipton.....	982 94	1007 76	1970 70	1117 68	1018 07	2135 75
Trousdale.....	272 46	285 15	557 61	999 15	910 09	1909 24
Union.....	169 07	176 95	346 02	292 91	266 80	559 71
Unicoi.....	482 59	505 05	987 64	179 08	163 12	342 20
Van Buren.....	133 87	140 10	273 97	529 44	482 25	1011 69
				142 02	129 87	271 89

Warren	615 96	644 63	1200 59	699 52	637 17	1886 69
Washington	738 25	772 62	1510 87	820 83	747 22	1567 55
Wayne	500 18	523 41	1023 54	552 79	508 52	1056 31
Weakley	1113 98	1165 82	2279 80	1247 22	1136 05	2383 27
White	473 38	495 42	988 80	549 71	500 72	1050 43
Williamson	1306 94	1367 78	2674 70	1318 89	1201 35	2520 24
Wilson	1177 55	1232 09	2409 64	1296 74	1181 17	2477 91
Total	\$68324 29	\$71503 74	\$139828 03	\$75375 00	\$68656 77	\$144031 77

1883.

Paid to Counties.....	\$139,828 03
Paid Expenses.....	7,842 11
Paid Salary of Superintendent of Public Instruction.....	2,454 96
Paid Clerk of Superintendent of Public Instruction.....	624 90
Total	\$150,750 00

1884.

Paid to Counties.....	\$144,031 77
Paid Expenses.....	4,389 56
Paid Salary of Superintendent of Public Instruction.....	1,828 75
Paid Clerk of Superintendent of Public Instruction.....	499 92
Total	\$150,750 00
Total paid out on account of Interest Permanent School Fund.....	\$301,500 00

Y—TABULAR STATEMENT showing the amount of Certificates of Indebtedness issued in lieu of the Torbett Issue, Bank of Tennessee Money, taken up and cancelled, as provided in Acts of 1883, and the amount received to December 19, 1884, and the amount outstanding December 19, 1884, arranged according to Series.

	Series A.	Series B.	Series C.	Series D.	Series E.	TOTAL.
	Due Oct., 1883.	Due Oct., 1884.	Due Oct., 1885.	Due Oct., 1886.	Due Oct., 1887.	
Amount issued to and including December 19, 1884.....	\$125409 00	\$125409 00	\$125409 00	\$125409 00	\$125409 00	\$627045 00
Amount received into State Treasury to and including December 19, 1884....	81306 00	16861 00	3389 00	864 00	21060 00	131263 00
Balance outstanding Dec. 19, 1884.	\$44103 00	\$108548 00	\$122020 00	\$116762 00	\$104349 00	\$495782 00

2--TABULAR STATEMENT, showing amount and source of Back Taxes and other Dues to State, collected by the Attorneys for the State, amount of Commissions paid, and net amount paid into the State Treasury from December 20, 1882, to December 19, 1884, inclusive.

NAME OF ATTORNEY.	FROM WHOM COLLECTED.	ON WHAT ACCOUNT COLLECTED.	COUNTY.	GROSS.	COMMISS'.	NET AM'T. PAID INTO STATE TREASURY.
a J. W. Baker	Nat. F. Dortch.....	Circuit Court Clerk.....	Davidson.....	150 22	72 50	77 72
W. L. Earltman, Agent.....	.....	Redemption Lands	Davidson	3125 74	314 67	2811 07
C. Weatherford.....	.....	Redemption Lands	Shelby	47642 57	5920 22	41722 35
R. P. Woodard .....	.....	Redemption Lands	Hamilton	1728 62	172 85	1555 77
James Glover.....	.....	Redemption Lands	Sumner	573 79	68 63	505 16
James Glover.....	.....	Circuit Court Clerk.....	White	200 00	30 00	170 00
R. R. Butler.....	W. M. Russell.....	Redemption Lands.....	Johnson	318 56	31 8	301 00
Champion & Head and J. B. Daniels	Albert S. Williams	Criminal Court Clerk	Davidson	140 57	21 09	119 48
Champion & Head and J. B. Daniels	R. L. Cain, agt. for J. W. Baker	Attorney for State.....	Davidson	322 20	48 39	273 81
b Champion & Head and J. B. Daniels	Louisey, & Nashv. R. R. Co. ....	.....	.....	76070 75	8562 17	67508 58
Jo. R. Hawkins	J. D. Arnette	Circuit Court Clerk	Lake.....	156 40	23 47	132 93
Jo. R. Hawkins	S. A. Williams	Circuit Court Clerk	Dyer	247 00	37 06	209 95
Jo. R. Hawkins	W. H. Carlton	Revenue Collector	Weakley	326 52	48 92	277 60
A. D. Bright	R. Medlin	County Court Clerk	Haywood	630 50	94 60	535 90
A. D. Bright	J. P. Burnes	Revenue Collector.....	Haywood	168 89	25 33	143 56
J. C. Park	H. A. Wilds	Clerk and Master	Greene.....	281 00	.....	281 00
John A. Pitts.....	Owen Harvey	Clerk and Master	Henderson.....	622 82	93 42	529 40
c John A. Pitts	R. M. Thompson	County Court Clerk	McNairy	1445 90	516 88	929 02
John A. Pitts	J. L. W. Boatman	Revenue Collector	McNairy	300 00	.....	300 00
John A. Pitts	C. Shull	County Court Clerk.....	McNairy	2000 00	300 00	1700 00
John A. Pitts .....	.....	Liquor Dealers	Wayne	68 70	10 30	58 40
John A. Pitts .....	.....	Redemption Lands.....	Decatur.....	164 50	24 67	139 83

Z—TABULAR STATEMENT, showing amount and source of Back Taxes and other dues to the State, etc.—Continued.

NAME OF ATTORNEY.	FROM WHOM COLLECTED.	ON WHAT ACCOUNT COLLECTED.	COUNTY.	GROSS.	COMMISS'.	NET AM'T PAID INTO STATE TREASURY.
John A. Pitts.....	H. I. Young.....	Clerk and Master.....	Perry.....	35 00	5 25	29 75
John A. Pitts.....	Jesse Taylor.....	County Court Clerk.....	Perry.....	1527 00	38 00	1489 00
Thomas J. Brogan.....	J. H. Mathes.....	County Court Clerk.....	Shelby.....	295 10	.....	295 10
S. W. Hawkins.....	.....	Redemption Lands.....	Decatur.....	148 05	15 40	132 65
W. Ewing.....	H. N. Cowden.....	Clerk and Master.....	Marshall.....	256 52	38 47	218 05
W. Ewing.....	Samuel Weaver.....	Revenue Collector.....	Lawrence.....	3549 70	.....	3549 70
J. W. Ewing.....	J. A. Moore.....	Circuit Court Clerk.....	Coffee.....	289 00	69 67	228 33
Z. W. Ewing.....	Peter O'Neal.....	County Court Clerk.....	Montgomery.....	4634 20	.....	4634 20
Z. W. Ewing.....	J. M. Hickey.....	County Court Clerk.....	Maury.....	225 67	.....	225 67
Z. W. Ewing.....	.....	Redemption Lands.....	Wilson.....	99 14	9 91	89 23
Z. W. Ewing.....	.....	Redemption Lands.....	Giles.....	120 89	12 08	108 81
Z. W. Ewing.....	.....	Redemption Lands.....	Maury.....	185 96	23 86	162 10
Z. W. Ewing.....	T. S. Steele.....	Clerk and Master.....	Bedford.....	50 00	7 50	42 50
Z. W. Ewing.....	W. H. Bean.....	Revenue Collector.....	Hamilton.....	204 30	20 43	183 87
Jas. A. Jones.....	.....	Redemption Lands.....	Canon.....	29 75	4 45	25 30
Champion & Head.....	.....	Redemption Lands.....	Maury.....	2148 40	317 09	1831 31
d Champion & Head.....	L. N. M. Cook.....	Trustee.....	Wilson.....	223 37	99 87	123 50
Champion & Head.....	.....	Redemption Lands.....	Williamson.....	354 74	45 86	308 88
Champion & Head.....	.....	Redemption Lands.....	Bedford.....	158 10	23 06	135 04
Champion & Head.....	H. S. Cooper.....	C. & M.....	Maury.....	46 25	6 93	39 32
Champion & Head.....	Rogersville & Jef. R. R. Co.....	.....	.....	268 68	68 80	199 88
Champion & Head.....	Mississippi & Tenn. R. R. Co.....	Redemption Lands.....	.....	4000 00	600 00	3400 00
Champion & Head.....	.....	Redemption Lands.....	Wilson.....	422 93	63 43	359 50
Champion & Head.....	Redemption Lands.....	Redemption Lands.....	Rutherford.....	109 56	11 27	98 29
Ewing & Smithson.....	.....	Redemption Lands.....	Lincoln.....	1241 32	124 12	1117 20
John C. Ferris.....	McNairy's Heirs.....	Sale of old prop'ty at Perry.....	.....	118 35	17 75	100 60
Lon. Blizard.....	.....	Redemption Lands.....	McMinn.....	125 61	12 56	113 05
E. L. Bullock.....	.....	Redemption Lands.....	Madison.....	241 95	36 28	205 67

W. C. Kelly.....	M. H. Johnson.....	Law Court Clerk.....	Gibson.....	50 00	7 50	42 50
W. C. Kelly.....	Wm. Moore.....	Circuit Court Clerk.....	Gibson.....	1865 75	204 86	1100 89
W. C. Kelly.....	R. E. Raines.....	C. & M.....	Gibson.....	7 50	1 12	6 88
W. C. Kelly.....	J. D. Carner.....	County Court Clerk.....	Gibson.....	389 83	50 89	288 44
W. C. Kelly.....	M. C. Holmes.....	County Court Clerk.....	Gibson.....	858 32	128 70	729 62
W. C. Kelly.....	Estates escaping assessors, etc	County Court Clerk.....	Gibson.....	170 24	9 35	160 89
Thompson & Cavitt.....	.....	Redemption Lands.....	Henry.....	36 73	7 79	28 36
Thompson & Cavitt.....	.....	Redempted Lands.....	Weakley.....	56 19	8 40	47 79
H. C. Carter.....	J. G. Hudson.....	Trustee.....	Benton.....	250 00	25 00	225 00
W. B. Stevens.....	.....	Redemption Lands.....	Monroe.....	80 61	12 49	68 12
J. W. Burney.....	.....	Redemption Lands.....	Dyer.....	304 43	42 29	262 14
J. W. Burney.....	M. T. Brackin.....	Circuit Court Clerk.....	Dyer.....	247 30	37 06	210 24
J. W. Burney.....	W. G. Harris.....	Circuit Court Clerk.....	Dyer.....	204 73	30 70	174 03
James Oldham.....	.....	Redemption Lands.....	Lauderdale.....	336 83	45 71	291 12
T. J. Naramore.....	.....	Redemption Lands.....	Cumberland.....	104 16	10 40	93 76
J. T. Carthel.....	.....	Reception Lands.....	Manry.....	432 89	54 36	378 53
Thompson & Cavitt and S. A. Champion.....	E. E. Falkner.....	County Court Clerk.....	Carroll.....	1011 48	101 14	910 34
Thompson & Cavitt and S. A. Champion.....	E. E. Falkner.....	County Court Clerk.....	Carroll.....	225 00	.....	225 00
Thompson & Cavitt and S. A. Champion.....	S. W. Hawkins.....	Attorney for State.....	Lawrence.....	2326 88	349 03	1977 85
S. A. Carroll.....	.....	Redemption Lands.....	Knox.....	171 91	24 88	147 03
J. R. Smith.....	.....	Redemption Lands.....	Williamson.....	508 62	50 82	457 80
R. M. Magness.....	.....	Redemption Lands.....	Rutherford.....	523 98	174 66	349 32
W. L. Hume.....	.....	Redemption Lands.....	Obion.....	765 31	45 91	719 40
W. A. Harrison.....	.....	Redemption Lands.....	Obion.....	671 56	67 15	604 41
W. A. Harrison.....	J. R. Meacham.....	Circuit Court Clerk.....	Hardeman.....	369 53	36 95	332 58
Jesse Norment.....	.....	Redemption Lands.....	Hardeman.....	582 52	58 24	524 28
Jesse Norment.....	James Fentress.....	Clerk and Master.....	Hardeman.....	72 50	10 87	61 63
Jesse Norment.....	Poston & Austin.....	Attorneys for State.....	Jackson.....	1587 71	260 66	1327 06
M. B. Young.....	.....	Redemption Lands.....	Jackson.....	1016 69	141 57	875 12
M. B. Young.....	J. H. Curtis.....	Circuit Court Clerk.....	Putnam.....	29 00	4 35	24 65
M. B. Young.....	J. A. Carlin.....	Circuit Court Clerk.....	Putnam.....	10 00	1 50	8 50
M. B. Young.....	H. Williams.....	Clerk and Master.....	Jackson.....	66 80	10 27	56 53
M. B. Young.....	J. W. Eaton.....	Clerk and Master.....	Putnam.....	36 50	5 81	30 69
M. B. Young.....	H. S. Young.....	Clerk and Master.....	Macon.....	5 00	75	4 25

Z—TABULAR STATEMENT, showing amount and source of Back Taxes and other dues to the State, etc.—Continued.

NAME OF ATTORNEY.	FROM WHOM COLLECTED.	ON WHAT ACCOUNT COLLECTED.	COUNTY.	GROSS.	COMMISS'S.	NET AM'T PAID INTO STATE TREASURY.
M. B. Young	J. M. Marshall	Circuit Court Clerk	Macon	5 00	75	4 25
M. B. Young	V. M. Whitley	Circuit Court Clerk	Macon	10 00	1 50	8 50
M. B. Young	T. J. Gregory	County Court Clerk	Macon	12 25	1 81	10 41
M. B. Young	J. K. P. Davis	Clerk and Master	Clay	8 30	1 24	7 06
M. B. Young	Jo. P. Thompson	Circuit Court Clerk	Clay	53 92	8 08	45 84
M. B. Young	J. Arnold	Clerk and Master	Putnam	9 75	97	8 78
M. B. Young	W. N. Gentry	Trustee	Putnam	276 00	27 60	248 40
C. Allen	J. F. Guinn	Revenue Collector	Meigs	100 00	.....	100 00
Byron Pope	G. S. Deakin	Clerk and Master	Marion	148 00	22 20	125 80
Byron Pope	W. F. Lewis	County Court Clerk	Marion	527 50	79 12	448 38
Byron Pope	J. L. Minter	County Court Clerk	Marion	100 00	15 00	85 00
Byron Pope	J. Crit. Kelly	Circuit Court Clerk	Marion	35 00	5 25	29 75
Byron Pope	M. V. Wyrick	Circuit Court Clerk	Marion	255 00	38 25	216 75
Byron Pope	E. K. Hamilton	Circuit Court Clerk	Marion	200 00	30 00	170 00
Byron Pope	A. K. Alley	Circuit Court Clerk	Marion	549 25	82 35	466 90
John J. Dupuy	.....	Redemption Lands	Lauderdale	902 86	135 42	767 44
Watson & Baker	A. S. Williams	Criminal Court Clerk	Davidson	2500 00	375 00	2125 00
Total	.....	.....	.....	\$178313 62	\$20925 79	\$157401 54

RECAPITULATION.

Net amount collected and paid into the Treasury on account of Trustees.....	586 90
Net amount collected and paid into the Treasury on account of County Court Clerks.....	12,506 08
Net amount collected and paid into the Treasury on account of Circuit Court Clerks.....	3,671 81
Net amount collected and paid into the Treasury on account of Chancery Court Clerks.....	1,411 14
Net amount collected and paid into the Treasury on account of Law Court Clerks.....	1,42 60
Net amount collected and paid into the Treasury on account of Criminal Court Clerks.....	2,244 48
Net amount collected and paid into the Treasury on account of Redemption Lands.....	57,338 83
Net amount collected and paid into the Treasury on account of Revenue Collections.....	4,684 73
Net amount collected and paid into the Treasury on account of Attorneys for State.....	3,578 72
Net amount collected and paid into the Treasury on account of Railroads.....	71,108 46
Net amount collected and paid into the Treasury on account of Liquor Dealers, Wayne County.....	58 40
Net amount collected and paid into the Treasury on account of sale old property at Penitentiary.....	100 60
Net amount collected and paid into the Treasury on account of estates escaping assessment.....	160 89
Total.....	\$157,401 54

NOTE.—In addition to the above there was collected and paid into the Treasury from Circuit Court Clerks on account of land redemptions, the sum of \$17,338 21.

(c) Fee of \$50 for services in four New Issue cases, included in attorneys' fees in this case; (b) Messrs. Watson & Baker were associated with attorneys in this case and Clerk and Master's commissions included; (c) Attorneys' commissions in case of State v. Jesse Taylor included in commissions of this case; (d) \$600 in addition to amount collected in this case was paid direct to this office after attorneys had instituted proceedings.

For which we have issued 310 bonds bearing 5 per cent. interest, \$1,000 each.....\$310,000 00
 For which we have issued 71 bonds bearing 5 per cent. interest, \$100 each.....7,100 00
 For which we have issued Certificates.....814 98
 \$ 317,914 98

RAILROAD DEBT—THREE PER CENTS.

Bonds.	No. Bonds.	Denom 't'n	Total A'mt	Interest.	Total Amount.	Amount Deducted.	Net Amount.
White "B".....	622	\$1,000 each	\$622,000				
White "C".....	86	" "	86,000				
Green "B".....	438	" "	438,000				
Green "C".....	62	" "	62,000				
Green (no letter).....	172	" "	172,000				
White "D".....	205	" "	205,000				
Compr'se, \$1,000 each	2366	" "	2,366,000				
Compr'se, \$500 each	580	500 each	290,000				
White (no letter).....	3	1,000 each	3,000				
Total.....	4534		\$4,244,000	\$832,307 50	\$5,076,307 50	\$1,627,638 83	\$ 3,448,668 67
				Amount certificates taken up.....			6,421 97
				Total.....			\$ 3,455,090 64
For which we have issued 3347 bonds bearing 3 per cent. interest, \$1,000 each.....							
For which we have issued 983 bonds bearing 3 per cent. interest, \$100 each.....							
For which we have issued Certificates.....							
							\$ 3,455,090 64

From the above statement it will be seen that the "Debt" or "New Settlement Bonds," upon which the State is now paying interest, is: Six per cent., \$582,100; 5 per cent., \$317,100; 3 per cent., \$3,445,300.

ZZ—BONDS FUNDED—Under Act March 15, 1883.

STATE DEBT PROPER—SIX PER CENTS.

Bonds.	No. Bonds	Interest.	Total Amount.	Amount deducted	Net Amount.
Green "C".....	127				
Green "F".....	238				
Green (no letter).....	26				
White (no letter).....	79				
White "B".....	16				
Green "E".....	1				
White "E".....	1				
White "F".....	29				
Total.....	517	\$ 250,780	\$ 767,780	\$ 184,266 20	\$ 583,513 80
Bonds \$1,000 each, \$517,000.....					3,466 47
Amount of Certificates taken up.....					
Total.....					\$ 586,980 27
For which we have issued 549 "Settlement Bonds", bearing 6 per cent. interest, \$1,000 each.....					
For which we have issued 331 "Settlement Bonds", bearing 6 per cent interest, \$100 each.....					
For which we have issued Certificates.....					
Total.....					\$549,000 00
					33,460 00
					4,880 27

STATE DEBT PROPER—FIVE PER CENTS.

Bonds.	No. Bonds	Interest.	Total Amount.	Amount deducted	Net Amount.
White "A" and White "AA" (renewed).....	258				
White (no letter).....	11				
Total.....	269	\$127,838 47	\$396,838 47	\$79,367 66	\$317,470 81
Bonds \$1,000 each, \$269,000.....					444 17
Amount Certificates taken up.....					
Total.....					\$317,914 98

For which we have issued 310 bonds bearing 5 per cent. interest, \$1,000 each.....\$310,000 00
 For which we have issued 71 bonds bearing 5 per cent. interest, \$100 each.....7,100 00
 For which we have issued Certificates 814 98
 \$ 317,914 98

RAILROAD DEBT—THREE PER CENTS.

Bonds.	No. Bonds.	Denom't'n	Total A'm't	Interest.	Total Amount.	Amount Deducted.	Net Amount.
White "B".....	622	\$1,000 each	\$622,000				
White "C".....	86	"	86,000				
Green "F".....	438	"	438,000				
Green "B".....	62	"	62,000				
Green (no letter).....	172	"	172,000				
White "D".....	205	"	205,000				
Compr'se, \$1,000 each	2366	"	2,366,000				
Compr'se, \$500 each	580	500 each	280,000				
White (no letter).....	3	1,000 each	3,000				
Total.....	4534		\$4,244,000	\$332,307 50	\$5,076,307 50	\$1,627,638 83	\$ 3,448,668 67
				Amount certificates taken up.....			6,421 97
				Total.....			\$ 3,455,090 64
For which we have issued 3,347 bonds bearing 3 per cent. interest, \$1,000 each.....						\$ 3,347,000 00	
For which we have issued 983 bonds bearing 3 per cent. interest, \$100 each.....						98,300 00	
For which we have issued Certificates.....						9,790 64	
							\$ 3,455,090 64

From the above statement it will be seen that the "Debt" or "New Settlement Bonds," upon which the State is now paying interest, is: Six per cent., \$582,100; 5 per cent., \$317,100; 3 per cent., \$3,445,300.

The bonds taken up have all been cancelled and filed away each month, as will be seen from the appended certificates of the Governor.

To His Excellency WM. B. BATE, Governor :

DEAR SIR: In obedience to the Act passed March 15, 1883, I herewith submit for your inspection and examination the following Bonds with coupons attached, which have been cancelled by me.

Very respectfully,

P. P. PICKARD, *Comptroller.*

This is to certify that I have examined and verified each of the bonds bearing the foregoing classification, with the letters and numbers, and find each of them, together with the coupons thereto attached, defaced and cancelled, as required by Act passed March 15, 1883, and approved March 20, 1883. I further state that the same, put up in packages, have been filed away in the Comptroller's office.

WM. B. BATE, *Governor.*

September 1, 1883.

To His Excellency WM. B. BATE, Governor :

DEAR SIR: In obedience to the Act passed March 15, 1883, I herewith submit for your inspection and examination the following bonds with coupons attached, which have been cancelled by me.

Very respectfully,

P. P. PICKARD, *Comptroller.*

This is to certify that I have examined and verified each of the bonds bearing the foregoing classification, with the letters and numbers, and find each of them, together with the coupons thereto attached, defaced and cancelled as required by Act passed March 15, 1883, and approved March 20, 1883. I further state that the same, put up in packages, have been filed away in the Comptroller's office.

WM. B. BATE, *Governor.*

October 1, 1883.

To His Excellency WM. B. BATE, Governor :

DEAR SIR: In obedience to the Act passed March 15, 1883, I

herewith submit for your inspection and examination the following bonds with coupons attached, which have been cancelled by me.

Very respectfully,

P. P. PICKARD, *Comptroller.*

This is to certify that I have examined and verified each of the bonds bearing the foregoing classification, with the letters and numbers, and find each of them, together with the coupons thereto attached, defaced and cancelled, as required by Act passed March 15, 1883, and approved March 20, 1883. I further state that the same, put up in packages, have been filed away in the Comptroller's office.

WM. B. BATE, *Governor.*

November 1, 1883.

To His Excellency WM. B. BATE, *Governor :*

DEAR SIR: In obedience to the Act passed March 15, 1883, I herewith submit for your inspection and examination the following bonds with coupons attached, which have been cancelled by me.

Very respectfully,

P. P. PICKARD, *Comptroller.*

This is to certify that I have examined and verified each of the bonds bearing the foregoing classification, with the letters and numbers, and find each of them, together with the coupons thereto attached, defaced and cancelled, as required by Act passed March 15, 1883, and approved March 20, 1883. I further state that the same, put up in packages, have been filed away in the Comptroller's office.

WM. B. BATE, *Governor.*

December 1, 1883.

To His Excellency WM. B. BATE, *Governor :*

DEAR SIR: In obedience to the Act passed March 15, 1883, I herewith submit for your inspection and examination the following bonds with coupons attached, which have been cancelled by me.

Very respectfully,

P. P. PICKARD, *Comptroller.*

This is to certify that I have examined and verified each of the bonds bearing the foregoing classification, with the letters and num-

bers, and find each of them, together with the coupons thereto attached, defaced and cancelled, as required by Act passed March 15, 1883, and approved March 20, 1883. I further state that the same, put up in packages, have been filed away in the Comptroller's office.

WM. B. BATE, *Governor*.

January 1, 1884.

To His Excellency WM. B. BATE, *Governor* :

DEAR SIR: In obedience to the Act passed March 15, 1883, I herewith submit for your inspection and examination the following bonds with coupons attached, which have been cancelled by me.

Very respectfully,

P. P. PICKARD, *Comptroller*.

This is to certify that I have examined and verified each of the bonds bearing the foregoing classification, with the letters and numbers, and find each of them, together with the coupons thereto attached, defaced and cancelled, as required by Act passed March 15, 1883, and approved March 20, 1883. I further state that the same, put up in packages, have been filed away in the Comptroller's office.

WM. B. BATE, *Governor*.

February 1, 1884.

To His Excellency WM. B. BATE, *Governor* :

DEAR SIR: In obedience to the Act passed March 15, 1883, I herewith submit for your inspection and examination the following bonds, with coupons attached, which has been cancelled by me.

Very respectfully,

P. P. PICKARD, *Comptroller*.

This is to certify that I have examined and verified each of the bonds bearing the foregoing classification, with the letters and numbers, and find each of them, together with the coupons thereto attached, defaced and cancelled, as required by act passed March 15, 1883, and approved March 20, 1883. I further state that the same, put up in packages, have been filed away in the Comptroller's office.

WM. B. BATE, *Governor*.

March 1, 1884.

To His Excellency WM. B. BATE, Governor :

DEAR SIR: In obedience to the Act passed March 15, 1883, I herewith submit for your inspection and examination the following bonds with coupons attached, which have been cancelled by me.

Very respectfully,

P. P. PICKARD, *Comptroller.*

This is to certify that I have examined and verified each of the bonds bearing the foregoing classification, with the letters and numbers, and find each of them, together with the coupons thereto attached, defaced and cancelled, as required by Act passed March 15, 1883, and approved March 20, 1883. I further state that the same, put up in packages, have been filed away in the Comptroller's office.

WM. B. BATE, *Governor.*

April 1, 1884.

To His Excellency WM. B. BATE, Governor :

DEAR SIR: In obedience to the Act passed March 15, 1883, I herewith submit for your inspection and examination the following bonds, with coupons attached, which have been cancelled by me.

Very respectfully,

P. P. PICKARD, *Comptroller.*

This is to certify that I have examined and verified each of the bonds bearing the foregoing classification with the letters and numbers, and find each of them, together with the coupons thereto attached, defaced and cancelled, as required by Act passed March 15, 1883, and approved March 20, 1883. I further state that the same, put up in packages, have been filed away in the Comptroller's office.

WM. B. BATE, *Governor.*

May 1, 1884.

To His Excellency WM. B. BATE, Governor :

DEAR SIR: In obedience to the act passed March 15, 1883, I herewith submit for your inspection and examination, the following bonds with coupons attached, which have been cancelled by me.

Very respectfully,

P. P. PICKARD, *Comptroller.*

This is to certify that I have examined and verified each of the bonds bearing the foregoing classification, with the letters and num-

bers, and find each of them, together with the coupons thereto attached, defaced and cancelled, as required by act passed March 15, 1883, and approved March 20, 1883. I further state, that the same, put up in packages, have been filed away in the Comptroller's office.

WM. B. BATE, *Governor*.

June 1, 1884.

To His Excellency WM. B. BATE, *Governor* :

DEAR SIR: In obedience to an act passed March 15, 1883, I herewith submit for your inspection and examination, the following bonds with coupons attached, which have been cancelled by me.

Very respectfully,

P. P. PICKARD, *Comptroller*.

This is to certify that I have examined and verified each of the bonds bearing the foregoing classification with the letters and numbers, and find each of them, together with the coupons thereto attached, defaced and cancelled, as required by act passed March 15, 1883, and approved March 20, 1883. I further state, that the same, put up in packages, have been filed away in the Comptroller's office.

WM. B. BATE, *Governor*.

July 1, 1884.

To His Excellency WM. B. BATE, *Governor* :

DEAR SIR: In obedience to an act passed March 15, 1883, I herewith submit for your inspection and examination the following bonds with coupons attached, which have been cancelled by me.

Very respectfully,

P. P. PICKARD, *Comptroller*.

This is to certify that I have examined and verified each of the bonds bearing the foregoing classification, with the letters and numbers, and find each of them, together with the coupons thereto attached, defaced and cancelled, as required by act passed March 15, 1883, and approved March 20, 1883. I further state, that the same, put up in packages, have been filed away in the Comptroller's office.

WM. B. BATE, *Governor*.

August 1, 1884.

To His Excellency WM. B. BATE, *Governor* :

DEAR SIR: In obedience to an act passed March 15, 1883, I

herewith submit for your inspection and examination the following bonds with coupons attached, which have been cancelled by me.

Very respectfully,

P. P. PICKARD, *Comptroller.*

This is to certify that I have examined and verified each of the bonds bearing the foregoing classification, with the letters and numbers, and find each of them, together with the coupons thereto attached, defaced and cancelled, as required by act passed March 15, 1883, and approved March 20, 1883. I further state, that the same, put up in packages, have been filed away in the Comptroller's office.

WM. B. BATE, *Governor.*

September 1, 1884.

To His Excellency WM. B. BATE, *Governor :*

DEAR SIR: In obedience to an act passed March 15, 1883, I herewith submit for your inspection and examination the following bonds with coupons attached, which have been cancelled by me.

Very respectfully,

P. P. PICKARD, *Comptroller.*

This is to certify that I have examined and verified each of the bonds bearing the foregoing classification, with the letters and numbers, and find each of them, together with the coupons thereto attached, defaced and cancelled, as required by act passed March 15, 1883, and approved March 20, 1883. I further state that the same, put up in packages, have been filed away in the Comptroller's office.

WM. B. BATE, *Governor.*

October 1, 1884.

To His Excellency WM. B. BATE, *Governor :*

DEAR SIR: In obedience to an act passed March 15, 1883, I herewith submit for your inspection and examination the following bonds with coupons attached, which have been cancelled by me.

Very respectfully, .

P. P. PICKARD, *Comptroller.*

This is to certify that I have examined and verified each of the bonds bearing the foregoing classification, with the letters and numbers, and find each of them, together with the coupons thereto attached, defaced and cancelled, as required by act passed March 15,

1883, and approved March 20, 1883. I further state, that the same, put up in packages, have been filed away in the Comptroller's office.

WM. B. BATE, *Governor*.

November 1, 1884.

To His Excellency WM. B. BATE, *Governor* :

DEAR SIR: In obedience to an act passed March 15, 1883, I herewith submit for your inspection and examination the following bonds with coupons attached, which have been cancelled by me.

Very respectfully,

P. P. PICKARD, *Comptroller*.

This is to certify that I have examined and verified each of the bonds bearing the foregoing classification, with the letters and numbers, and find each of them, together with the coupons thereto attached, defaced and cancelled, as required by act passed March 15, 1883, and approved March 20, 1883. I further state, that the same, put up in packages, have been filed away in the Comptroller's office.

WM. B. BATE, *Governor*.

December 1, 1884.

UNFUNDED DEBT.

BONDS.	No. Bonds.	Amount.	Interest Estimated from	Total Am't.
Union Bank Bonds.....	125	\$ 125,000	Jan. 1, '83.....	\$ 269,375
Nashville & Shelby T. P. Co. } 66 for \$1,000 00	66	66,666	Jan. 25, '61.....	146,665
Lebanon & Nashville T. P. Co. } 1 for \$ 666 66	1	2,000	May 21, '61.....	4,350
Lagrange & Memphis R. R. Co....	12	12,000	March 18, '64.....	24,600
Bank Tennessee Bonds.....	17	17,000	May 7, '68.....	38,500
White "A" Bonds.....	111	111,000	Jan., '71, 5 per ct.	188,700
White "B" Bonds.....	3853	3,853,000	Jan., '76, 6 per ct.	6,049,210
White "C" Bonds.....	690	690,000	Jan., '76, 6 per ct.	1,083,300
White (no letter) Bonds.....	1	1,000	Jan., '76, 6 per ct.	1,850
White "C" Capitol Bonds.....	2	2,000	Jan., '70, 6 per ct.	3,500
White "F" Capitol Bonds.....	59	59,000	Jan., '72, 6 per ct.	106,020
White (no letter) Bonds.....	9	9,000	Jan., '72, 6 per ct.	16,020
White (no letter) Bonds.....	251	251,000	Jan., '76, 6 per ct.	393,071
Green (no letter) Bonds.....	1080	1,080,000	Jan., '76, 6 per ct.	1,686,600
Green "B" Bonds.....	248	248,000	Jan., '76, 6 per ct.	439,368
Green "C" Bonds.....	102	102,000	Jan., '76, 6 per ct.	160,140
White "D" Bonds.....	869	869,000	Jan., '76, 6 per ct.	1,363,380
Compromise \$1,000 Bonds.....	4918	4,918,000	Jan., '82, 3 per ct.	5,665,704
Compromise \$500 Bonds.....	574	277,000	Jan., '82, 3 per ct.	595,510
Green "F" Bonds.....	1565	1,565,000	Jan., '76, 6 per ct.	2,457,060
Total.....				\$20,696,851

BIENNIAL REPORT
OF THE
TREASURER
OF THE
STATE OF TENNESSEE,
TO THE
FORTY-FOURTH GENERAL ASSEMBLY.

JANUARY 5, 1885.

ATHA THOMAS, TREASURER.

NASHVILLE:
ALBERT B. TAVEL, PRINTER TO THE STATE.
1885.

OFFICE OF STATE TREASURER, }
NASHVILLE, Dec. 20, 1884. }

To His Excellency, WILLIAM B. BATE, Governor of Tennessee:

In compliance with the law, I herewith submit my report as State Treasurer for two years, ending with December 19, 1884:

Balance Cash in Treasury Dec. 19, 1882.....	\$ 508,015 08	
Cash received into the Treasury from Dec. 20, 1882, to Dec. 31, 1882	57,069 65	
Cash received into the Treasury from Jan. 1, 1883, to Jan. 5, 1883.....	38,254 15	
Cash received into the Treasury on account of error reported by Elliston to Investigating Committee.....	1 74	
Total Cash.....		\$ 603,340 62
Amount paid out on Comptroller's Warrants from Dec. 20, 1882, to Dec. 31, 1882, inclusive.....	\$ 16,146 50	
Amount paid out on Comptroller's Warrants from Jan. 1, 1883, to Jan. 5, 1883, inclusive.....	47,786 77	
Total Disbursements.....		\$ 63,933 27
Balance Cash in Treasury Jan. 6, 1883.....		\$ 539,407 34

Of the above balance there was turned over to me, as Treasurer, by the Investigating Committee, on Jan. 18, 1883.....\$ 246,790 76
Cash received into the Treasury from Jan. 18, 1883, to Dec. 19, 1884, inclusive..... 2,099,563 18

Total Cash \$2,346,353 94

DISBURSEMENTS.

Amount paid out on Comptroller's Warrants from Jan. 18, 1883, to Dec. 19, 1884.....	1,701,139 11
Balance Cash in Treasury Dec. 20, 1884.....	\$ 645,214 83

This balance consists, in part, of Certificates issued for the Bank of Tennessee (new issue) money received for Taxes and other dues to the State, amounting to the sum of.....\$ 131,263 00

There was used by the Treasurer of the State, acting under the advice and recommendation of the Governor and Attorney-General, in the redemption of 127 Bonds of the State of Tennessee, of \$1,000 each, with interest coupons from—ordered to be sold by a decree of the Chancery Court at Nashville, in the case of the State of Tennessee vs. Edgefield & Kentucky Railroad Company, et al., the sum of 10,386 95 \$ 141,649 95

Actual Cash Balance Dec. 20, 1884..... \$ 503,564 88

The Tables following will show the monthly receipts and disbursements; the sources from which funds have been received, and the accounts upon which they have been paid out.

Very respectfully,

ATHA THOMAS, Treasurer.

REMARKS.

In order to reduce the account to the actual cash in the Treasury it will be necessary for the Legislature to direct that the Treasurer receive a pay warrant for the \$131,263 certificates for the Bank of Tennessee Money (New Issue) received for taxes and dues to the State; also, that a pay warrant issue to the Treasurer of the State for the \$10,386.95 used by him in the redemption of the 127 State of Tennessee bonds; and these bonds, which are on special deposit in the Fourth National Bank of Nashville, should be ordered by the Legislature to be cancelled.

Of the deficit of \$292,616.58 in the former Treasurer's accounts, as shown by this report, there has been collected and paid into the Treasury anew upon receivable warrants the sum of \$13,976.39. There are in the possession of the State Treasurer four bills of exchange for \$500 each, dated January 5, 1883, drawn by the State National Bank of New Orleans on the National Park Bank of New York, payable to Van Leer Polk, and by him endorsed in blank.

These bills of exchange were received by the State Treasurer through your Excellency from the captors of the former State Treasurer, and the same were promptly presented to the National Park Bank for payment, which was refused. These bills were protested in the city of New York, and then returned to the State Treasurer. The same bills were then presented to the State National Bank of New Orleans and payment demanded, but refused. It is proper for the Legislature to direct what shall be done with these bills of exchange.

The State Treasurer in April, 1883, received from Jesse G. Wallace, attorney for the State, under a decree in the case of State v. J. E. Rust, in the Chancery Court at Nashville, the following assets or funds:

Bank of Tennessee Money.....	\$ 2,182 00
Bank of Chattanooga Money.....	40 00
Bills on other Banks.....	23 00
Three State of Tennessee Bonds, \$1,000 each, 5 per cent., Numbers 395, 424, 396, white "A,".....	3,000 00
Detached Coupons of Tennessee State Bonds.....	27,000 00
United States Currency.....	25

These funds are subject to the direction of the Legislature.

It is proper to state, of the actual cash balance of \$503,566.48 reported in the Treasury on the 20th day of December, 1884, there is one item of \$21,141.41 deposit in the Mechanics' Bank or Mechanics' National Bank of Knoxville. This sum was receipted for to the former Treasurer as being on deposit in one of these banks. The Mechanics' Bank was found to have become extinct, and the Mechanics' National Bank refused to honor the Treasurer's check therefor. Thereupon suits were instituted in the Chancery Court at Knoxville, in the name of the State, upon the bond given by the Mechanics' Bank as a State depository, and against the Mechanics' National Bank of Knoxville for this sum. These suits are still pending.

The attention of your Excellency is called to the general appropriation act of the last General Assembly, being chapter 259 of the acts of 1883, and approved March 30, 1883. In it appropriations are made for the current expenses of the State Government from March 19, 1883, to March 19, 1885, while the preceding Legislature had made appropriations for current expenses up to December 19, 1882, thus leaving the current expenses for one-quarter of a year unprovided for.

There is attached to this report in the form of an appendix, the report of the Governor, Treasurer and Comptroller, who were directed, by an act of the Legislature, approved March 29, 1883, to prepare and issue certificates for the Bank of Tennessee Money (new issue). Reference is here made to that report for the amount of the Bank of Tennessee Money (new issue) taken up and cancelled, and the amount of certificates issued.

It is very gratifying to the State Treasurer to be able to report that all warrants against the State have been promptly paid on presentation, and that there is at present in the Treasury a fund sufficient to meet all appropriations.

Respectfully submitted,

ATHA THOMAS, *Treasurer.*

REPORT OF NEW ISSUE FUNDING BOARD.

There were presented to the "New Issue" Funding Board, to be funded into certificates of the State, Bank of Tennessee ("New Issue") notes of the denomination of \$5 and upwards the sum of.....		\$631,804 68
Of this amount there was rejected by the Board of Experts the sum of.....	\$ 2,646 40	
Notes of the "Old Issue" of the Bank returned to the owners thereof.....	2,160 00	4,806 40
Total amount "New Issue" notes funded into certificates,		\$626,998 28
Balance cash received by the Treasurer in making proper division of certificates in exchange of "New Issue" notes.		46 72
		<u>\$627,045 00</u>

The following certificates have been issued for the above amounts—

Nos. 3 to 5,600, both inc., of \$20 denomination, \$100 each..	\$559,800 00
Nos. 1 to 2,328, both inc., of \$5 denomination, \$25 each..	58,200 00
Nos. 1 to 1,809, both inc., of \$1 denomination, \$5 each..	9,045 00
	<u>\$627,045 00</u>

TABULAR STATEMENT, Showing Amount of Certificates of Indebtedness issued in lieu of the Torbett Issue, Bank of Tennessee Money, redeemed as provided under Acts of 1883; and the amount of Certificates received to December 20, 1884, and the amount outstanding December 20, 1884, arranged according to series:

	Series A Due Oct. 1883.	Series B Due Oct. 1884.	Series C Due Oct. 1885.	Series D Due Oct. 1886.	Series E Due Oct. 1887.	TOTAL.
Amount issued to and includ'g Dec. 19, 1884.	\$125,409 00	\$125,409 00	\$125,409 00	\$125,409 00	\$125,409 00	\$627,045 00
Amount received into State Treasury to and includ'g Dec. 19, 1884.	81,306 00	16,861 00	3,389 00	8,647 00	21,060 00	131,263 00
Bal. outstanding Dec. 20, 1884.....	44,103 00	108,548 00	122,020 00	116,762 00	104,349 00	495,782 00

There was turned over to the Treasurer of the State, by T. W. Wrenne, C. & M., under act of last General Assembly, \$150,222 of the Bank of Tennessee "New Issue" notes, which were cancelled, as provided by said act.

Respectfully submitted,

WM. B. BATE,
P. P. PICKARD,
ATHA THOMAS,

New Issue Funding Board.

STATEMENT OF RECEIPTS from January 18, 1883, to December 19, 1884, inclusive.

Balance on hand January 18, 1883..		\$ 246,790 76
Receipts from January 18, 1883, to January 31, 1883, inclusive.....	\$ 79,010 01	
Receipts for February.....	130,004 41	
" " March	71,731 16	
" " April	52,525 42	
" " May.....	72,924 29	
" " June	37,381 84	
" " July.....	63,236 57	
" " August	51,580 47	
" " September.....	41,162 75	
" " October.....	46,556 91	
" " November	76,573 22	
" " December	121,798 17	844,485 22
1884.		
Receipts for January	186,667 60	
" " February.....	216,167 01	
" " March.....	189,187 29	
" " April	116,976 12	
" " May.....	67,070 09	
" " June	60,750 87	
" " July.....	88,487 73	
" " August.	38,348 11	
" " September.....	52,213 77	
" " October	73,647 27	
" " November	50,379 64	
" " December 1 to 19, incl'e	115,182 46	1,255,077 96
		<hr/>
		\$2,346,353 94

STATEMENT OF DISBURSEMENTS from January 18, 1883, to December 19, 1884, inclusive.

Disbursements from January 18, 1883			
to January 31, 1883, inclusive.....	\$	63,635	90
Disbursements for February.....		50,001	70
" " March		61,313	23
" " April		137,633	47
" " May.....		33,572	78
" " June.....		73,000	39
" " July.....		112,128	52
" " August		56,518	55
" " September.....		68,656	28
" " October.....		34,492	60
" " November.....		35,852	44
" " December.		64,624	70
	\$	791,430	56
1884.			
Disbursements for January.....		156,729	36
" " February.....		53,025	32
" " March		46,654	05
" " April		61,326	08
" " May		48,430	25
" " June.....		55,365	10
" " July		196,848	51
" " August.....		47,820	42
" " September.....		78,778	15
" " October		67,396	57
" " November.....		47,040	82
" " Dec. 1 to 19, incl'e		50,293	92
Balance on hand Dec. 20, 1884.....			
	\$	909,708	55
		645,214	83
		\$2,346,353	94

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RECAPITULATION OF DISBURSEMENTS *for two years, beginning Jan.
18, 1883, and ending with December 19, 1884, inclusive.*

Supreme Court Reports.....	\$ 4,372 96
State Prosecutions.....	373,596 08
Arresting Fugitives.....	13,865 50
Lunatic to Asylum.....	1,807 48
Executive Salary.....	21,494 76
Judicial Salary.....	188,049 21
Officers of Penitentiary Salary.....	9,808 03
Attorney-General and Reporter's Salary.....	6,000 00
Adjutant-General Salary.....	2,343 33
Superintendent Hospital Insane, (Mid. Tenn.) Salary.....	3,500 00
Librarian Salary.....	2,333 28
Assistant-Librarian Salary.....	958 19
Superintendent of Capitol.....	750 00
Clerk Hire, Comptroller's Office.....	4,639 92
Clerk Hire, Secretary of State's Office.....	1,725 00
Clerk Hire, Treasurer's Office.....	1,890 24
Clerk Hire, Superintendent Public Instruction Office.....	968 18
Expense, Executive.....	931 87
Expense, Supreme Court.....	14,690 12
Expense, Library.....	499 73
Expense, Public Arms.....	70 05
Expense, Capitol.....	8,429 48
Expense, Funding Board.....	11,458 64
Expense, Legislative, per diem and mileage.....	51,871 96
Expense, Legislative, Miscellaneous.....	5,517 13
Expense, Treasurer's Office.....	719 48
Expense, Comptroller's Office.....	1,276 65
Expense, Secretary of State's Office.....	874 05
Expense, Common Schools.....	8,350 87
Expense, Court of Referees.....	4,610 12
Expense, Bank of Tennessee, "New Issue".....	3,629 74
Expense, Railroad Commissioners' Office.....	456 20
Railroad Assessment.....	6,191 10
Enumeration of Voters.....	141 29
Public Printing.....	17,104 01
Publishing Governor's Proclamations.....	311 55
Publishing Acts.....	543 50
Tax Aggregates.....	2,321 50
Express Charges.....	273 00
Court of Referees Salary.....	38,958 32
Railroad Commissioners' Salary.....	5,499 78
Land Sales.....	10,288 00
Interest State Debt.....	218,041 42
Interest Spencer T. Hunt Fund.....	888 32
Interest School Fund.....	284,416 30
Superintendent Public Instruction Salary.....	4,172 83
Tennessee School for the Blind.....	30,650 00
Tennessee School for Deaf and Dumb.....	51,000 00
Hospital for the Insane, Middle Tennessee.....	140,348 08
Hospital for the Insane, East Tennessee.....	69,331 29
Bureau of Agriculture, Statistics, Mines and Immigration.....	31,000 00
State Board of Health.....	3,865 83
State Normal College.....	15,441 66
Tennessee Money, "New Issue," Attorneys' Fees.....	25 00
Tennessee Money, "Old Issue," Cancelled.....	166 00
Treasurer Warrants, Cancelled.....	9 00
Refunded Revenue.....	4,510 45
Tennessee Money, "New Issue".....	4,529 50
Removal of Penitentiary.....	213 45
Fees of Secretary of State.....	1,108 50
Pension to Blind.....	1,530 00
State Penitentiary Building, Repairs, etc.....	4,377 20
Scalp Account.....	4 00
Jackson Statue Pedestal.....	2,000 00

\$1,701,139 11

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**RECAPITULATION OF DISBURSEMENTS FROM JANUARY 18 TO
JANUARY 31, 1883, (INCLUSIVE).**

State Prosecutions.....	\$13,541 72	
Arresting Fugitives.....	250 00	
Salaries, Judicial.....	2,499 96	
Salaries, Executive.....	655 52	
Salaries, Supt. Pub. Instruction.....	166 25	
Salaries, Officers of Penitentiary.....	213 83	
Salaries, Adjutant-General.....	93 33	
Salaries, Assistant Librarian.....	41 66	
Clerk Hire Supt. Pub. Instruction.....	41 66	
Interest State Debt.....	4,117 50	
Interest School Fund.....	25,917 45	
Expense Secretary of State's Office...	10 00	
Expense Supreme Court.....	144 00	
Deaf and Dumb School.....	4,400 00	
State Normal College.....	1,900 00	
Bureau Ag., Stat., Mines and Im'g'n..	9,000 00	
Public Printing.....	400 80	
Tennessee Money "new issue" expense	25 00	
Supreme Court Reports.....	33 45	
Refunded Revenue.....	59 74	
Enumeration of Voters.....	78 78	
Tax Aggregate	35 25	
Land Sales	10 00	
Excess of Receipts		\$63,635 90
		15,374 11
		<hr/>
		\$79,010 01

Balance in Treasury January 18, 1883.....\$246,790 76
 Receipts from Jan. 18 to Jan. 31, 1883, (inclusive) 79,010 01

\$325,800 77

Disbursements from Jan. 18 to Jan. 31, 1883, (inclusive) 63,635 90

Balance in Treasury February 1, 1883.....\$262,164 87

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RECAPITULATION OF DISBURSEMENTS FOR FEBRUARY, 1883.

State Prosecutions	\$15,010 95	
Salaries, Judicial	5,277 78	
Salaries, Executive	780 84	
Salaries, Att'y Gen'l and Reporter...	250 00	
Salaries, Supt. Pub. Instruction.....	166 25	
Salaries, Librarian.....	500 00	
Salaries, Officers Penitentiary.....	349 99	
Salaries, Adjutant General.....	50 00	
Salaries, Supt. of Capitol.....	50 00	
Clerk Hire, Treasurer's Office	62 50	
Clerk Hire, Sec'y of State's Office....	75 00	
Clerk Hire, Comptroller's Office.....	300 00	
Expense, Treasurer's Office	70 15	
Expense, Comptroller's Office.....	15 00	
Expense, Sec'y of State's Office	52 00	
Expense, Common Schools.....	1,698 75	
Expense, Supreme Court.....	350 59	
Expense, Public Arms	35	
Expense, Executive.....	89 87	
Expense, Capitol.....	611 23	
Interest School Fund	13,658 81	
Interest State Debt	216 42	
Publishing Governor's Proclamation..	4 00	
Enumeration of Voters.....	13 99	
Land Sales	126 00	
Refunded Revenue.....	94 65	
Tax Aggregates	18 75	
Arresting Fugitives.....	9,890 00	
Lunatics to Asylum.....	113 94	
Public Printing.....	98 00	
Supreme Court Reports.....	5 89	
Excess of Receipts.....		\$50,001 70
		80,002 71
		<hr/> \$130,004 41

Balance in Treasury February 1, 1883\$262,164 87
 Receipts for February, 1883..... 130,004 41

\$392,169 28
 Disbursements for February, 1883..... 50,001 70

Balance in Treasury March 1, 1883.....\$342,167 58

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RECAPITULATION OF DISBURSEMENTS FOR MARCH, 1883. *

State Prosecutions	\$16,320 00	
Salaries, Judicial.....	12,243 33	
Salaries, Executive.....	979 17	
Salaries, Att'y Gen'l and Reporter.....	250 00	
Salaries, Supt. Pub. Instruction.....	515 33	
Salaries, Librarian	83 33	
Salaries, Assistant Librarian.....	41 66	
Salaries, Officers of Penitentiary.....	627 82	
Salaries, Adjutant General.....	100 00	
Clerk Hire, Treasurer's Office.....	125 00	
Clerk Hire, Comptroller's Office.....	173 32	
Clerk Hire, Sec'y of State's Office.....	75 00	
Expense, Treasurer's Office.....	18 00	
Expense, Comptroller's Office.....	16 00	
Expense, Common Schools.....	392 00	
Expense, Sec'y of State's Office.....	34 00	
Expense, Supreme Court.....	1,695 13	
Expense, Executive.....	28 50	
Expense, Capitol.....	510 20	
Interest School Fund.....	18,803 08	
Enumeration of Voters.....	31 85	
Land Sales.....	11 00	
Tax Aggregates.....	13 50	
Library Expense	3 00	
Arresting Fugitives.....	350 00	
Lunatics to Asylum.....	148 35	
Clerk Hire, Supt. Pub. Instruction ..	41 66	
Superintendent Capitol Salary	50 00	
Tennessee Deaf and Dumb School.....	4,400 00	
Tennessee School for Blind.....	2,950 00	
Legislative Expense, Miscellaneous...	283 00	
Excess of Receipts.....		\$61,313 23
		10,417 93
		\$71,731 16

Balance in Treasury March 1, 1883\$342,167 58

Receipts for March, 1883..... 71,731 16

Disbursements for March, 1883..... **\$413,898 74**
61,313 23

Balance in Treasury April 1, 1883.....\$352,585 51

RECAPITULATION OF RECEIPTS FOR APRIL, 1883.

Trustees.....	\$13,621 24	
Revenue Collectors.....	399 47	
County Court Clerks.....	27,212 05	
Circuit Court Clerks.....	3,993 80	
Chancery Court Clerks.....	3,277 85	
Supreme Court Clerks.....	1,037 00	
Law Court Clerks.....	195 01	
Criminal Court Clerks.....	795 38	
Redemption of Lands.....	1,993 62	
Excess of Disbursements.....		\$ 52,525 42
		85,108 05
		\$137,633 47

RECAPITULATION OF DISBURSEMENTS FOR APRIL, 1883.

State Prosecutions.....	\$10,871 47	
Salaries, Judicial	5,783 27	
Salaries, Executive.....	1,000 00	
Salaries, Adjutant General.....	100 00	
Salaries, Librarian.....	83 33	
Salaries, Assistant Librarian.....	41 66	
Salaries, Officers of Penitentiary.....	174 99	
Salaries, Supt. Hospital for Insane..	500 00	
Clerk Hire Supt. Pub. Instruction ...	83 32	
Clerk Hire Sec'y of State's Office....	150 00	
Clerk Hire Treasurer's Office.....	83 33	
Expense Treasurer's Office.	18 83	
Expense Capitol	374 51	
Expense Comptroller's Office.....	135 65	
Expense Secretary of State's Office ...	111 20	
Expense Library.....	5 00	
Expense Supreme Court.....	1,233 44	
Expense Common Schools.....	46 25	
Expense Legislative, proper.....	51,871 96	
Expense Legislative, miscellaneous...	3,604 13	
Hospital for Insane, Middle Tenn....	39,848 08	
Bureau Ag., Stat., Mines and Im'g'n..	2,750 00	
Public Printing.....	5,595 71	
Removal of Penitentiary	213 45	
State Board of Health.....	612 80	
Land Sales.....	37 00	
Interest State Debt.....	150 00	
Interest School Fund.....	405 13	
Railroad Assessments.....	944 00	
Supreme Court Reports.....	1,176 00	
Arresting Fugitives.....	816 66	
Tennessee School for Deaf and Dumb	7,500 00	
Enumeration of Voters.....	7 60	
Fees of Secretary of State... ..	1,108 50	
Executive Expense.....	196 20	
		\$137,633 47

Balance in Treasury April 1, 1883..... ..\$352,585 51
 Receipts for April, 1883..... .. 52,525 42

\$405,110 93
 Disbursements for April, 1883 137,633 47

\$267,477 46
 Balance in Treasury May 1, 1883.....

RECAPITULATION OF RECEIPTS FOR MAY, 1883.

Trustees.....	\$13,551 09	
Revenue Collectors.....	143 56	
County Court Clerks.....	30,944 39	
Circuit Court Clerks.....	815 89	
Chancery Court Clerks	598 97	
Criminal Court Clerks.....	958 23	
Redemption of Lands	7,277 16	
Bank State Tax.....	1,000 00	
State Prosecutions	10 00	
Lessees State Penitentiary.....	17,625 00	
		\$72,924 29
		\$72,924 29

RECAPITULATION OF DISBURSEMENTS FOR MAY, 1883.

State Prosecutions.....	\$18,163 76	
Salaries, Judicial	6,712 32	
Salaries, Executive.....	679 17	
Salaries, Officers of Penitentiary.....	574 99	
Salaries, Adjutant-General....	100 00	
Salaries, Assistant Librarian.....	41 66	
Salaries, Superintendent Capitol.....	100 00	
Salaries, Supt. Pub. Instruction	332 50	
Salaries, Railroad Commissioners..	166 66	
Clerk Hire Supt. Pub. Instruction ..	41 66	
Clerk Hire Secretary of State's Office,	75 00	
Clerk Hire Comptroller's Office.....	208 33	
Clerk Hire Treasurer's Office.....	119 47	
Expense Comptroller's Office	77 00	
Expense Secretary of State's Office....	30 00	
Expense Treasurer's Office	15 00	
Expense Capitol.....	594 39	
Expense Common Schools.....	81 55	
Expense Executive.....	32 10	
Expense Legislative, miscellaneous...	630 00	
Interest School Fund.....	2,902 94	
Tennessee School for Blind.....	1,250 00	
Public Printing.....	204 75	
Land Sales.....	38 00	
State Normal College....	200 00	
Pension to Blind.....	80 00	
Lunatics to Asylum.....	121 53	
Excess of Receipts.....		\$33,572 78
		39,351 51
		<hr/>
		\$72,924 29

Balance in Treasury May 1, 1883.....\$267,477 46

Receipts for May, 1883.....72,924 29

Disbursements for May, 1883 33,572 78

Balance in Treasury June 1, 1883.....\$306,828 97

RECAPITULATON OF RECEIPTS FOR JUNE 1883.

Trustees.....	\$8,599 21
Revenue Collectors	59 00
County Court Clerks.....	27,386 98
Circuit Court Clerks	108 71
Chancery Court Clerks	87 76
Redemption of Lands.....	440 83
Bureau Ag., Stat., Mines and Im'g'n..	699 35
Excess of Disbursements.....	\$37,381 84 35,618 55
	\$73,000 39

Balance in Treasury June 1, 1883	\$306,828	97
Receipts for June, 1883	37,381	84
	<u>\$344,210</u>	<u>81</u>
Disbursements for June, 1883.....	73,000	39
Balance in Treasury July 1, 1883.....	\$271,210	42

RECAPITULATION OF DISBURSEMENTS FOR JUNE, 1883.

State Prosecutions.....	\$17,003 58	
Salaries, Judicial.....	12,041 58	
Salaries, Executive	1,133 34	
Salaries, Officers of Penitentiary	491 65	
Salaries, Adjutant General.....	100 00	
Salaries, Assistant Librarian.....	83 32	
Salaries, Librarian	83 33	
Salaries, Court of Referees	1,000 00	
Salaries, Supt. Pub. Instruction.....	166 25	
Salaries, Att'y Gen'l and Reporter ...	750 00	
Clerk Hire, Sec'y State's Office	75 00	
Clerk Hire, Comptrollers Office... ..	416 66	
Clerk Hire, Treasurer's Office	83 33	
Clerk Hire, Supt. Pub. Instruction...	41 66	
Expense, Sec'y of State's Office.....	30 00	
Expense, Treasurer's Office.....	131 30	
Expense, Comptroller's Office.....	242 20	
Expense, Railroad Commis'n's Office..	73 50	
Expense, Supreme Court.....	1,671 34	
Expense, Court of Referees	112 75	
Expense, Common Schools.....	1,747 85	
Expense, Executive.....	111 34	
Expense, Legislative Miscellaneous...	500 00	
Tennessee School for Deaf and Dumb	2,500 00	
Tennessee Money " New Issue "	4,529 50	
Tennessee Money " Old Issue ".....	166 00	
Treasury Warrant	9 00	
Tennessee School for Blind.....	2,950 00	
Bureau Ag., Stat., Mines and Im'g'n..	2,750 00	
Tax Aggregate.....	66 75	
Hospital for Insane, Middle Tenn.....	14,250 00	
Hospital for Insane, East Tenn.....	86 50	
Interest State Debt.....	390 00	
Pension to Blind.....	60 00	
Arresting Fugitives.....	200 00	
State Penit'y Building, Repairs, etc...	950 00	
Public Printing	2,846 60	
Funding Board Expense.....	220 00	
Railroad Commissioners' Salary.....	499 98	
Public Arms Expense	10 75	
Capitol Expense.....	630 39	
Library Expense.....	5 00	
Railroad Assessment	500 00	
Lunatics to Asylum	113 94	
Supreme Court Reports.....	1,176 00	\$73,000 39

RECAPITULATION OF RECEIPTS FOR JULY, 1883.

Trustees... ..	\$17,529 26	
County Court Clerks.. ..	24,157 22	
Circuit Court Clerks.....	2,962 30	
Chancery Court Clerks.....	2,924 79	
Criminal Court Clerks.....	489 45	
Law Court Clerks	10 65	
Redemption of Lands.....	9,361 37	
State Tax, Insurance Companies.....	5,751 53	
Bank Tax, State.....	50 00	
Excess of Disbursements.....		\$63,236 57 48,891 95
		<hr/> \$112,128 52

Balance in Treasury August 1, 1883.. ..\$271,210 42

Receipts for July, 1883..... 63,236 57

\$334,446 99

Disbursements for July, 1883..... 112,128 52

Balance in Treasury August 1, 1883..... \$222,318 47

RECAPITULATION OF DISBURSEMENTS FOR JULY, 1883.

Arresting Fugitives.....	\$100 00	
State Prosecutions.....	15,401 36	
Salaries, Judicial	7,603 97	
Salaries, Executive.....	1,229 17	
Salaries, Officers of Penitentiary.	341 65	
Salaries, Adjutant General	100 00	
Salaries, Court of Referees.....	3,208 33	
Salaries, Supt. Pub. Instruction.....	166 25	
Salaries, Att'y Gen'l and Reporter.....	250 00	
Clerk Hire, Sec'y State's Office	75 00	
Clerk Hire, Treasurer's Office.....	83 33	
Expense, Treasurer's Office.....	37 00	
Expense, Comptroller's Office.....	9 00	
Expense, Executive Office.....	24 14	
Expense, Railroad Commissioners.....	5 00	
Expense, Court of Referees.....	415 60	
Expense, Funding Board.....	2,583 33	
Expense, Supreme Court	164 40	
Railroad Commissioner's Salary	499 98	
Supt. Pub. Instruction, Clerk Hire...	41 66	
Tennessee School for Blind.....	1,500 00	
Tennessee School for Deaf and Dumb.	5,000 00	
Publishing Acts.....	181 00	
State Penit'y Building, Repairs, etc...	600 00	
Tax Aggregate.....	194 25	
Land Sales.....	5 00	
Tenn. Money, "New Issue," Expense.	882 00	
Supreme Court Reports.....	37 80	
State Board of Health.....	427 80	
Hospital for Insane, East Tennessee..	1,055 00	
Pension to Blind.....	90 00	
Enumeration of Voters.....	9 07	
Lunatics to Asylum.....	45 30	
Public Printing.....	1,310 20	
Railroad Assessment.....	150 00	
Interest School Fund.....	47,266 93	
Interest State Debt	20,870 00	
Capitol Expense.....	165 00	
		\$112,128 52

RECAPITULATION OF RECEIPTS FOR AUGUST, 1883.

Trustees.....	\$ 4,627 00	
County Court Clerks.....	22,580 62	
Circuit Court Clerks.....	750 77	
Chancery Court Clerks.....	430 45	
Criminal Court Clerks.....	692 25	
Law Court Clerks.....	82 88	
Redemption of Lands.....	2,951 22	
State Tax from Insurance Companies.	4,464 97	
Lessees State Penitentiary.....	14,895 79	
Railroad State Tax.....	104 52	
Excess of Disbursements.....		\$51,580 47 4,938 08
		<hr/> \$56,518 55

Balance in Treasury August 1, 1883.....	\$222,318	47
Receipts for August, 1883.....	51,580	47
	<hr/>	
	\$273,898	94
Disbursements for August, 1883.....	56,518	55
	<hr/>	
Balance in Treasury September 1, 1883.....	\$217,380	39

RECAPITULATION OF DISBURSEMENTS FOR AUGUST, 1883.

State Prosecutions.....	\$13,289 87	
Salaries, Judicial.....	5,816 58	
Salaries, Executive.....	979 17	
Salaries, Officers of Penitentiary.....	474 99	
Salaries, Court of Referees.....	1,750 00	
Salaries, Attorney-Gen'l and Reporter	250 00	
Salaries, Adjutant General.....	100 00	
Salaries, Railroad Commissioners.....	333 33	
Salaries, Supt. Pub. Instruction..	166 25	
Salaries, Supt. Hosp. Insane M. Tenn.	500 00	
Salaries, Assistant Librarian.....	83 32	
Clerk Hire Treasurer's Office.....	83 33	
Clerk Hire Secretary of State's Office.	75 00	
Clerk Hire Comptroller's Office.....	416 66	
Clerk Hire Supt. Pub. Instruction....	41 66	
Expense Comptroller's Office.....	48 00	
Expense Funding Board.....	2,170 46	
Expense Court of Referees.....	412 40	
Expense Railroad Commissioners.....	5 00	
Expense Supreme Court	277 59	
Expense Capitol.....	359 68	
Expense Library.....	36 50	
Expense Common Schools.....	914 00	
Publishing Acts	181 50	
Lunatics to Asylum	225 90	
Refunded Revenue.....	40 45	
Arresting Fugitives.....	100 00	
Public Printing.....	2,048 50	
Railroad Assessment.....	710 00	
Tax Aggregates.....	129 75	
Interest Spencer T. Hunt Fund.....	414 40	
Land Sales.....	10 00	
State Penit'y Building, Repairs, etc...	223 75	
Hospital for Insane, Middle Tenn.....	14,250 00	
Hospital for Insane, East Tenn.....	125 00	
Interest School Fund.....	9,394 92	
Pension to Blind.....	80 00	
Supreme Court Reports.....	60	
		\$56,518 55

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RECAPITULATION OF DISBURSEMENTS FOR SEPTEMBER, 1883.

State Prosecutions.....	\$17,325 46
Salaries, Judicial.....	10,376 92
Salaries, Executive.....	604 17
Salaries, Officers of Penitentiary.....	491 65
Salaries, Court of Referees.....	2,250 00
Salaries, Attorney-Gen'l and Reporter.....	250 00
Salaries, Adjutant-General.....	100 00
Salaries, Railroad Commissioners.....	833 30
Salaries, Supt. Pub. Instruction.....	166 25
Salaries, Librarian	83 33
Salaries, Superintendent Capitol.....	200 00
Clerk Hire Treasurer's Office.....	83 33
Clerk Hire Secretary of State's Office.....	75 00
Clerk Hire Comptroller's Office.....	208 33
Clerk Hire Supt. Pub. Instruction....	41 66
Expense Comptroller's Office.....	176 80
Expense Treasurer's Office.....	60 30
Expense Secretary of State's Office...	336 35
Expense Executive.....	36 42
Expense Railroad Commissioners.....	33 50
Expense Supreme Court.....	373 48
Expense Tenn. Money, "new issue".....	51 00
Expense Common Schools.....	625 00
Expense Court of Referees.....	193 50
Expense Library.....	17 50
Expense Funding Board.....	489 33
Expense Capitol.....	221 76
Publishing Acts	181 00
Public Printing.....	2,350 00
Hospital for Insane, East Tennessee..	1,450 00
Interest Spencer T. Hunt Fund.....	473 92
Bureau Ag., Stat., Mines and Im'g'n.	2,750 00
State Penit'y Building, repairs, etc....	1,115 25
Land Sales.....	23 00
Tennessee School for Blind.....	5,400 00
Tennessee School for Deaf and Dumb	5,000 00
Tax Aggregate	126 00
Pension to Blind.....	110 00
Refunded Revenue.....	658 42
Railroad Assessment.....	1,435 60
Interest School Fund.....	11,872 25
Public Arms Expense.....	6 50
	\$68,656 28

Balance in Treasury October 1, 1883.....	\$189,886	86
Receipts for October, 1883.....	46,556	91
	<hr/>	
	\$236,443	77
Disbursements for October, 1883	34,492	60
	<hr/>	
Balance in Treasury November 1, 1883.....	\$201,951	17

RECAPITULATION OF DISBURSEMENTS FOR OCTOBER, 1883.

State Prosecutions.....	\$16,069 56	
Salaries, Judicial.....	5,814 79	
Salaries, Executive.....	1,375 00	
Salaries, Officers of Penitentiary	324 99	
Salaries, Court of Referees.....	3,000 00	
Salaries, Att'y Gen'l and Reporter.....	500 00	
Salaries, Adjutant General.....	100 00	
Salaries, Railroad Commissioners.....	499 98	
Salaries, Assistant Librarian.....	83 33	
Salaries, Supt. Hosp. Insane, M. Tenn.	500 00	
Clerk Hire, Sec'y of State's Office.....	75 00	
Clerk Hire, Supt. Pub. Instruction...	41 66	
Expense, Comptroller's Office	15 00	
Expense, Treasurer's Office.....	30 00	
Expense, Sec'y of State's Office.....	15 00	
Expense, Library.....	90 50	
Expense, Tenn. Money, "New Issue"...	3 50	
Expense, Court of Referees.....	345 89	
Expense, Common Schools.....	12 45	
Expense, Supreme Court.....	162 70	
Expense, Capitol.....	268 70	
Expense, Public Arms.....	2 70	
Expense, Executive.. ..	20 00	
Expense, Railroad Commissioners.....	7 50	
Expense, Legislative Miscellaneous...	500 00	
Public Printing.....	78 30	
Lunatics to Asylum.....	89 10	
State Penit'y Building, Repairs, etc...	236 78	
Railroad Assessment.....	262 20	
State Board of Health.....	353 95	
Land Sales.....	5 00	
Refunded Revenue.....	108 02	
State Normal College.....	150 00	
Pension to Blind.....	150 00	
Tax Aggregate.. ..	237 75	
Hospital for Insane, East Tennessee...	125 00	
Interest School Fund.....	2,838 25	
Excess of Receipts.....		\$34,492 60
		12,064 31
		\$46,556 91

RECAPITULATION OF RECEIPTS FOR NOVEMBER, 1883.

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RECAPITULATION OF DISBURSEMENTS FOR NOVEMBER, 1883.

Arresting Fugitives.....	\$150 00	
State Prosecutions.....	11,375 63	
Salaries, Judicial	6,566 51	
Salaries, Executive	683 34	
Salaries, Court of Referees.....	1,250 00	
Salaries, Adjutant General.....	100 00	
Salaries, Officers of Penitentiary.....	324 98	
Salaries, Railroad Commissioners.....	499 98	
Salaries, Supt. Pub. Instruction.....	332 50	
Salaries, Librarian.....	499 98	
Salaries, Assistant Librarian.....	41 66	
Clerk Hire, Comptroller's Office.....	416 66	
Clerk Hire, Treasurer's Office.....	166 66	
Clerk Hire, Sec'y of State's Office.....	75 00	
Clerk Hire, Supt. Public Instruction..	41 66	
Expense, Capitol.....	363 10	
Expense, Executive.....	8 15	
Expense, Comptroller's Office.....	15 00	
Expense, Court of Referees.....	105 30	
Expense, Funding Board.....	166 66	
Expense, Common Schools.....	1 50	
Expense, Sec'y of State's Office.....	35 00	
Expense, Public Arms.....	14 35	
Expense, Railroad Commissioners.....	61 12	
Expense, Supreme Court.....	166 00	
Public Printing.....	96 60	
Hospital for Insane, East Tenn.....	1,500 00	
Hospital for Insane, Middle Tenn....	5,000 00	
State Normal College.....	2,500 00	
Refunded Revenue.....	230 93	
Pension to Blind.....	70 00	
Interest School Fund.....	2,814 92	
Land Sales.....	18 00	
Tax Aggregates.....	161 25	
Excess of Receipts.....		\$35,842 44
		40,720 78
		<hr/> \$76,573 22

RECAPITULATION OF RECEIPTS FOR DECEMBER, 1883.

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Balance in Treasury December 1, 1883.....	\$242,671	95
Receipts for December, 1883.....	121,798	17
	<hr/>	
	\$364,470	12
Disbursements for December, 1883	64,624	70
	<hr/>	
Balance in Treasury January 1, 1884.....	\$299,845	42

RECAPITULATION OF DISBURSEMENTS FOR DECEMBER, 1883.

State Prosecutions.....	\$15,933 18	
Salaries, Judicial.....	9,774 91	
Salaries, Executive.....	754 17	
Salaries, Court of Referees.....	3,349 99	
Salaries, Adjutant-General.....	100 00	
Salaries, Officers of Penitentiary	641 65	
Salaries, Railroad Commissioners.....	333 32	
Salaries, Attorney-Gen'l and Reporter	250 00	
Salaries, Assistant Librarian.....	41 66	
Salaries, Superintendent of Capitol....	200 00	
Salaries, Librarian	83 33	
Salaries, Supt. Pub. Instruction.....	166 25	
Clerk Hire Comptroller's Office.....	208 33	
Clerk Hire Treasurer's Office.....	83 33	
Clerk Hire Secretary of State's Office	75 00	
Clerk Hire Supt. Pub. Instruction....	41 66	
Expense Capitol.....	531 45	
Expense Court of Referees.....	356 83	
Expense Supreme Court ..	1,696 80	
Expense Railroad Commissioners.....	43 55	
Expense Executive.....	24 00	
Expense Comptroller's Office.....	15 00	
Expense Treasurer's Office.....	15 00	
Expense Funding Board.....	83 33	
Hospital Insane, Middle Tennessee...	14,250 00	
Hospital Insane, East Tennessee.....	1,600 00	
Bureau Ag., Stat., Mines and Im'g'n.	2,750 00	
Land Sales.....	5 00	
Tax Aggregates	100 50	
Public Printing.....	38 00	
Interest School Fund.....	2,066 46	
Publishing Governor's Proclamation..	12 00	
Tennessee School for Blind.....	4,000 00	
Tennessee School for Deaf and Dumb	5,000 00	
Excess of Receipts.....		\$64,624 70
		57,174 73
		\$121,798 17

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RECAPITULATION OF DISBURSEMENTS FOR JANUARY, 1884.

State Prosecutions.....	\$21,250 42	
Salaries, Judicial.....	8,266 57	
Salaries, Executive.....	1,454 17	
Salaries, Court of Referees	750 00	
Salaries, Officers of Penitentiary.....	341 66	
Salaries, Railroad Commissioners.....	666 64	
Salaries, Adjutant-General... ..	100 00	
Salaries, Assistant Librarian.....	41 66	
Salaries, Attorney General and Rep..	250 00	
Salaries, Supt. Pub. Instruction.....	166 25	
Clerk Hire Secretary of State.....	75 00	
Clerk Hire Supt. Pub. Instruction....	41 66	
Expense Capitol.....	290 50	
Expense Executive.....	138 65	
Expense Comptroller's office.....	61 30	
Expense Treasurer's office.....	33 40	
Expense Secretary of State's Office...	15 00	
Expense Court of Referees.....	54 00	
Expense Funding Board.....	227 23	
Expense Supreme Court.....	116 00	
Expense Library.....	5 00	
Expense Railroad Commissioners.....	20 89	
Expense Common Schools.....	38 60	
Public Printing.....	1,233 90	
Pension to Blind.....	80 00	
Interest State Debt.....	59,275 50	
Interest School Fund.....	58,874 30	
Hospital for Insane, East Tenn.....	750 00	
State Board of Health.....	575 13	
Express Charges.....	273 00	
Supreme Court Reports.....	1,233 43	
Tax Aggregate	22 50	
Land Sales	7 00	
Excess of Receipts		\$156,729 36
		29,938 24
		<hr/> \$186,667 60
Balance in Treasury January 1, 1884.....	\$299,845 42	
Receipts for January 1884.....	186,667 60	
		<hr/> \$486,513 02
Disbursements for January, 1884.....	156,729 36	
		<hr/> \$329,783 66
Balance in Treasury February 1, 1884.....	\$329,783 66	

Balance in Treasury February 1, 1884	\$329,783 66
Receipts for February, 1884.....	216,167 01
	<hr/>
	\$545,950 67
Disbursements for February, 1884.....	53,025 32
	<hr/>
Balance in Treasury March 1, 1884.....	\$492,925 35

RECAPITULATION OF DISBURSEMENTS FOR FEBRUARY, 1884.

State Prosecutions	\$19,951 64	
Salaries, Judicial	6,691 58	
Salaries, Executive	604 17	
Salaries, Commission of Referees	1,500 00	
Salaries, Railroad Commission	333 32	
Salaries, Officers Penitentiary	408 32	
Salaries, Adjutant General	100 00	
Salaries, Supt. of Capitol	50 00	
Salaries, Att'y Gen'l and Reporter	500 00	
Salaries, Supt. Pub. Instruction	166 25	
Salaries, Librarian	83 33	
Salaries, Assistant Librarian	41 66	
Clerk Hire, Comptroller's Office	208 33	
Clerk Hire, Treasurer's Office	83 33	
Clerk Hire, Sec'y of State's Office	75 00	
Clerk Hire, Supt Public Instruction	41 66	
Expense, Capitol	295 58	
Expense, Public Arms	2 45	
Expense, Supreme Court	155 75	
Expense, Court of Referees	296 00	
Expense, Executive	21 08	
Expense, Library	147 40	
Expense, Railroad Commissioners	6 32	
Expense, Common Schools	1,225 00	
Expense, Treasurer's Office	40 00	
Expense, Comptroller's Office	20 00	
Expense, Funding Board	83 33	
Tax Aggregates	39 75	
Interest State Debt	6,931 50	
Land Sales	5 00	
Pension to Blind	30 00	
Public Printing	188 10	
State Normal College	2,500 00	
Scalp Accounts	4 00	
Lunatics to Asylum	205 52	
Jackson Statue Pedestal	2,000 00	
Interest School Fund	7,989 95	
Excess of Receipts		\$53,025 32
		163,141 69
		<hr/> \$216,167 01

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RECAPITULATION OF DISBURSEMENTS FOR MARCH, 1884.

State Prosecutions	\$13,060 72	
Salaries, Judicial.....	9,349 90	
Salaries, Executive.....	454 17	
Salaries, Court of Referees.....	1,500 00	
Salaries, Railroad Commissioners.....	499 98	
Salaries, Officers of Penitentiary.....	324 99	
Salaries, Adjutant General.....	100 00	
Salaries, Supt. Pub. Instruction.....	166 25	
Salaries, Supt. Hos. Insane, M. Tenn.	500 00	
Salaries, Assistant Librarian.....	41 66	
Clerk Hire, Comptroller's Office.....	416 66	
Clerk Hire, Treasurer's Office.....	166 66	
Clerk Hire, Sec'y of State's Office.....	75 00	
Clerk Hire, Sup. Pub. Instruction....	41 66	
Expense, Capitol.....	250 73	
Expense, Court of Referees.....	147 00	
Expense, Railroad Commissioners.....	12 50	
Expense, Common Schools.....	861 00	
Expense, Tenn. Money, "new issue".	977 45	
Expense, Treasurer's Office.....	3 00	
Expense, Executive.....	23 00	
Expense, Library.....	8 00	
Expense, Supreme Court.....	1,512 97	
Expense, Funding Board.....	883 33	
Lunatics to Asylum.....	105 03	
State Normal College.....	800 00	
Tennessee School for Blind.....	4,000 00	
Pension to Blind.....	20 00	
Public Printing	42 00	
Interest State Debt.....	6,275 00	
Interest School Fund.....	1,285 39	
Bureau Ag., Stat., Mines and Im'gn...	2,750 00	
		\$46,654 05
Excess of Receipts.....		142,533 24
		<hr/> \$189,187 29

Balance in Treasury March 1, 1884\$492,925 35
Receipts for March, 1884..... 189,187 29

\$682,112 64
Disbursements for March, 1884..... 46,654 05

Balance in Treasury April 1, 1884.....\$635,458 59

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RECAPITULATION OF DISBURSEMENTS FOR APRIL, 1884.

State Prosecutions.....	\$15,584 29	
Salaries, Judicial	7,941 60	
Salaries, Executive.....	1,225 00	
Salaries, Officers of Penitentiary.....	324 99	
Salaries, Adjutant-General.....	100 00	
Salaries, Court of Referees.....	2,250 00	
Salaries, Assistant Librarian.....	41 66	
Salaries, Librarian.....	83 33	
Salaries, Supt. Public Instruction.....	166 25	
Salaries, Supt. Hosp. Insane, M. Tenn	500 00	
Clerk Hire Treasurer's Office.....	83 33	
Clerk Hire, Comptroller's Office.....	125 00	
Clerk Hire Sec'y of State's Office.....	75 00	
Clerk Hire Supt. Pub. Instruction ...	41 66	
Expense Capitol	356 83	
Expense, Court of Referees.....	272 00	
Expense Common Schools.....	527 95	
Expense Supreme Court.....	524 70	
Expense, 'Tenn. Money, "new issue."	162 25	
Expense, Railroad Commissioners....	45 00	
Expense, Funding Board.....	168 33	
Expense Secretary of State's Office ...	5 00	
Expense Comptroller's Office.....	25 00	
Hospital for Insane, Middle Tenn....	14,250 00	
Hospital for Insane, East Tenn.....	500 00	
Tennessee School for Deaf and Dumb	7,500 00	
State Normal College.....	2,150 00	
State Board of Health.....	538 25	
Pension to Blind.....	190 00	
Arresting Fugitives.....	739 99	
Interest State Debt.....	4,469 00	
Land Sales.....	5 00	
Interest School Fund.....	354 67	
		\$81,326 08
		55,650 04
		<hr/> \$116,976 12

Balance in Treasury April 1, 1884.....\$635,458 59
 Receipts for April, 1884..... 116,976 12

\$752,434 71
 Disbursements for April, 1884 61,326 08

Balance in Treasury May 1, 1884.....\$691,108 63

Balance in Treasury May 1, 1884.....	\$691,108 63
Receipts for May, 1884.....	67,070 09
	<hr/>
	\$758,178 72
Disbursements for May, 1884.....	48,430 25
	<hr/>
Balance in Treasury June 1, 1884.....	\$709,748 47

RECAPITULATION OF DISBURSEMENTS FOR MAY, 1884.

State Prosecutions.....	\$24,524 08	
Salaries, Judicial	6,874 82	
Salaries, Executive.....	904 17	
Salaries, Officers of Penitentiary.....	558 31	
Salaries, Adjutant-General....	100 00	
Salaries, Court of Referees	1,975 00	
Salaries, Librarian	249 99	
Salaries, Assistant Librarian.....	41 66	
Salaries, Supt. Pub. Instruction	166 25	
Salaries, Railroad Commissioners..	333 32	
Salaries, Attorney General and Rep. .	750 00	
Clerk Hire, Comptroller's Office.....	83 33	
Clerk Hire, Secretary of State's Office	75 00	
Clerk Hire, Supt. Pub. Instruction...	41 66	
Expense, Court of Referees.....	393 78	
Expense, Capitol.....	321 60	
Expense, Executive.....	67 10	
Expense, Supreme Court.....	4 75	
Expense, Railroad Commissioners....	8 82	
Expense, Tenn. Money, "new issue."	1,025 00	
Expense, Public Arms.....	12 50	
Expense, Comptroller's Office	18 00	
Expense, Treasurer's Office	33 75	
Expense, Secretary of State's Office...	15 00	
Expense, Common Schools.....	124 22	
Expense, Library.....	5 00	
Expense, Funding Board.....	83 33	
Expense, Railroad Assessment.....	725 00	
Tax Aggregates.....	36 00	
Land Sales.....	5 00	
Public Printing.....	184 55	
State Normal College... ..	2,600 00	
Arresting Fugitives.....	450 00	
State Penit'y Building, repairs, etc...	254 77	
Pension to Blind.....	200 00	
Hospital Insane, East Tenn.....	1,670 00	
Interest State Debt.....	2,811 00	
Interest School Fund.....	703 49	
Excess of Receipts.....		\$48,430 25
		18,639 84
		<hr/> \$67,070 09

RECAPITULATON OF RECEIPTS FOR JUNE, 1884.

Trustees.....	\$24,932 94	
County Court Clerks.....	31,724 43	
Circuit Court Clerks	960 75	
Chancery Court Clerks	56 18	
Supreme Court Clerks.....	43 50	
Redemption of Lands.....	2,014 71	
State Tax from Railroads.....	18 36	
State Tax from Express Companies...	1,000 00	
		\$60,750 87

Balance in Treasury June 1, 1884	\$709,748	47
Receipts for June, 1884	60,750	87
	<hr/>	
	\$770,499	34
Disbursements for June, 1884.....	55,365	10
	<hr/>	
Balance in Treasury July 1, 1884.....	\$715,134	24

RECAPITULATION OF DISBURSEMENTS FOR JUNE, 1884.

State Prosecutions.....	\$17,626 61	
Salaries, Judicial.....	13,021 39	
Salaries, Court of Referees	2,525 00	
Salaries, Executive	983 34	
Salaries, Officers of Penitentiary	408 32	
Salaries, Adjutant General.....	100 00	
Salaries, Assistant Librarian.....	41 66	
Salaries, Att'y Gen'l and Reporter ...	250 0	
Clerk Hire, Comptroller's Office.	208 33	
Clerk Hire, Treasurer's Office	83 33	
Clerk Hire, Sec'y State's Office	75 00	
Clerk Hire, Supt. Pub. Instruction...	41 66	
Expense, Library.....	5 00	
Expense, Capitol.....	248 21	
Expense, Treasurer's Office.....	128 75	
Expense, Comptroller's Office.....	204 70	
Expense, Executive.....	20 00	
Expense, Common Schools.....	12 00	
Expense, Supreme Court.....	551 20	
Expense, Funding Board	83 33	
Expense, Court of Referees	99 00	
Expense, Sec'y of State's Office.....	25 00	
Railroad Assessment	400 00	
Pension to Blind.....	40 00	
Revenue Refunded	14 94	
Arresting Fugitives.....	28 85	
Bureau Ag., Stat., Mines and Im'g'n..	2,750 00	
Tennessee School for Deaf and Dumb	5,000 00	
Tennessee School for Blind.....	4,000 00	
State Penit'y Building, Repairs, etc...	319 34	
Tax Aggregate.....	99 75	
Hospital for Insane, East Tenn.....	3,337 96	
Interest School Fund.....	223 43	
Interest State Debt.....	2,409 00	
Excess of Receipts.....		\$55,365 10
		5,385 77
		<hr/> \$60,750 87

RECAPITULATION OF RECEIPTS FOR JULY, 1884.

Trustees.....	\$19,126 59	
County Court Clerks.....	21,935 95	
Circuit Court Clerks.....	3,112 31	
Chancery Court Clerks.....	1,845 82	
Supreme Court Clerks.....	1,745 96	
Law Court Clerks	14 62	
Criminal Court Clerks.....	441 19	
Revenue Collectors	173 11	
Redemption of Lands.....	4,036 42	
State Tax, Insurance Companies.....	6,821 46	
Lessees State Penitentiary.....	25,250 00	
Sale McMinnville & Manchester R'y.	3,974 30	
Excess of Disbursements.....		\$88,487 73
		108,360 78
		<hr/>
		\$196,848 51

Balance in Treasury July 1, 1884.....	\$715,134 24
Receipts for July, 1884.....	88,487 73
	<hr/>
Disbursements for July, 1884.....	\$803,621 97
	196,848 51
	<hr/>
Balance in Treasury August 1, 1884.....	\$606,773 46

RECAPITULATION OF DISBURSEMENTS FOR JULY, 1884.

State Prosecutions.....	\$ 9,833 79	
Salaries, Judicial	8,736 81	
Salaries, Court of Referees.....	2,250 00	
Salaries, Executive.....	604 17	
Salaries, Officers of Penitentiary.	424 99	
Salaries, Adjutant General	100 00	
Salaries, Librarian	83 33	
Salaries, Assistant Librarian.....	41 66	
Salaries, Att'y Gen'l and Reporter.....	250 00	
Salaries, Supt. Pub. Instruction.....	332 50	
Salaries, Hospital Insane, Mid. Tenn	500 00	
Clerk Hire, Comptroller's Office.....	291 66	
Clerk Hire, Treasurer's Office.....	83 33	
Clerk Hire, Sec'y State's Office	75 00	
Clerk Hire, Supt. Pub. Instruction...	41 66	
Expense, Capitol	747 64	
Expense, Public Arms.....	7 40	
Expense, Executive Office.....	20 55	
Expense, Library.....	10 00	
Expense, Court of R-ferees.....	315 00	
Expense, Common Schools.....	7 25	
Interest School Fund.....	51,042 45	
Interest State Debt	88,923 00	
Hospital for Insane, Middle Tenn.....	14,250 00	
Hospital for Insane, East Tennessee..	8,262 21	
State Board of Health.....	718 70	
Railroad Assessment.....	948 10	
Refunded Revenue.....	2,536 29	
State Normal College.....	141 66	
Publishing Governor's Proclamation..	96 00	
Lunatics to Asylum.....	143 07	
Pension to Blind.....	50 00	
Public Printing.....	91 00	
Supreme Court Reports.....	1,183 54	
Land Sales.....	2,544 50	
Tax Aggregate.....	161 25	
Supreme Court Expense.....	1,000 00	
		\$196,848 51

RECAPITULATION OF RECEIPTS FOR AUGUST, 1884.

Trustees.....	\$5,948 23	
County Court Clerks.....	21,939 70	
Circuit Court Clerks.....	796 35	
Chancery Court Clerks	153 25	
Criminal Court Clerks.....	321 75	
Law Court Clerks.....	84 83	
Revenue Collectors.....	1,500 00	
Redemption of Lands.....	2,400 34	
State Tax from Banks.....	50 00	
State Tax from Railroads.....	240 00	
State Tax from Insurance Companies.	4,913 66	
Excess of Disbursements		\$38,348 11
		9,172 31
		\$47,820 42

RECAPITULATION OF DISBURSEMENTS FOR AUGUST, 1884.

State Prosecutions.....	\$9,979 73	
Salaries, Judicial.....	4,941 96	
Salaries, Court of Referees.....	2,500 00	
Salaries, Executive.....	604 17	
Salaries, Officers of Penitentiary.....	391 65	
Salaries, Adjutant General.....	100 00	
Salaries, Librarian.....	83 33	
Salaries, Attorney Gen'l and Reporter	250 00	
Clerk Hire, Comptroller's Office.....	458 33	
Clerk Hire, Treasurer's Office.....	166 66	
Clerk Hire, Secretary of State's Office	75 00	
Clerk Hire, Supt. Pub. Instruction...	41 66	
Expense, Capitol.....	260 86	
Expense, Funding Board	3,946 66	
Expense, Court of Referees.....	255 61	
Expense, Supreme Court.....	1 75	
Expense, Public Arms	1 15	
Expense, Treasurer's Office.....	30 00	
Expense, Sec'y of State's Office.....	135 50	
Expense, Library.....	5 00	
Expense, Railroad Commissioners.....	30 00	
Expense, Common Schools.....	6 00	
Hospital for Insane, East Tenn.....	6,334 14	
Refunded Revenue.....	175 47	
State Penit'y Building, Repairs, etc...	674 31	
Railroad Assessment.....	116 20	
Lunatics to Asylum	101 10	
Arresting Fugitives.....	68 80	
Public Printing.....	119 60	
Pension to Blind.....	120 00	
Publishing Governor's Proclamation..	152 55	
Supreme Court Reports.....	26 25	
Land Sales.....	718 00	
Tax Aggregates.....	70 50	
Interest School Fund.....	9,109 98	
Interest State Debt	5,768 50	
		\$47,820 42
Balance in Treasury August 1, 1884.....	\$606,773 46	
Receipts for August, 1884.....	38,348 11	
		\$645,121 57
Disbursements for August, 1884.....	47,820 42	
Balance in Treasury September 1, 1884.....	\$597,301 15	

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RECAPITULATION OF DISBURSEMENTS FOR SEPTEMBER, 1884.

State Prosecutions.....	\$18,824 23	
Interest School Fund.....	10,521 31	
Interest State Debt.....	2,226 00	
Salaries, Judicial.....	11,037 88	
Salaries, Court of Referees.....	1,900 00	
Salaries, Executive.....	454 17	
Salaries, Officers of Penitentiary.....	491 65	
Salaries, Adjutant-General.....	100 00	
Salaries, Librarian	83 33	
Salaries, Assistant Librarian.....	41 66	
Salaries, Supt. Pub. Instruction.....	332 50	
Clerk Hire, Comptroller's Office.....	83 33	
Clerk Hire, Treasurer's Office	83 33	
Clerk Hire, Secretary of State's Office	75 00	
Clerk Hire, Supt. Pub. Instruction...	41 66	
Expense, Capitol	232 59	
Expense, Executive	20 00	
Expense, Public Arms.....	10 90	
Expense, Library.....	47 48	
Expense, Railroad Commissioners.....	63 42	
Expense, Court of Referees.....	265 60	
Expense, Secretary of State's Office..	15 00	
Expense, Comptroller's Office	130 00	
Expense, Funding Board	103 33	
Expense, Supreme Court.....	491 62	
Refunded Revenue.....	323 39	
Publishing Governor's Proclamation.	37 00	
Arresting Fugitives.....	100 00	
Hospital for Insane, East Tennessee..	7,453 52	
Tennessee School for Deaf and Dumb	5,000 00	
Pension to Blind.....	20 00	
Tennessee School for Blind.....	4,000 00	
Ho-pital for Insane, Middle Tenn.....	10,000 00	
Bureau Ag., Stat., Mines and Im'g'n.	2,750 00	
Land Sales.....	1,243 50	
Tax Aggregates.....	174 75	
		\$78,778 15

Balance in Treasury October 1, 1884.....	\$570,736	77
Receipts for October, 1884.....	73,647	27
	<hr/>	
	\$644,384	04
Disbursements for October, 1884.....	67,396	57
	<hr/>	
Balance in Treasury November 1, 1884.....	\$576,987	47

RECAPITULATION OF DISBURSEMENTS FOR OCTOBER, 1884.

State Prosecutions.....	\$17,160 01	
Interest School Fund.....	1,186 68	
Interest on State Debt.....	7,278 00	
Salaries, Judicial.....	6,308 26	
Salaries, Court of Referees.....	2,750 00	
Salaries, Executive.....	525 00	
Salaries, Officers of Penitentiary	341 66	
Salaries, Adjutant General.....	100 00	
Salaries, Librarian.....	41 66	
Salaries, Att'y Gen'l and Reporter.....	500 00	
Salaries, Supt. Hosp. Insane, M. Tenn.	500 00	
Clerk Hire, Sec'y of State's Office.....	75 00	
Clerk Hire, Supt. Pub. Instruction...	41 66	
Clerk Hire, Comptroller's Office.....	208 33	
Clerk Hire, Treasurer's Office.....	83 33	
Expense, Capitol.....	258 79	
Expense, Comptroller's Office	20 00	
Expense, Court of Referees.....	217 11	
Expense, Common Schools.....	15 00	
Expense, Executive.. ..	9 31	
Expense, Library.....	50 15	
Expense, Supreme Court.....	1,205 00	
Expense, Funding Board.....	83 33	
State Normal College.....	2,500 00	
Pension to Blind.....	40 00	
State Board of Health.....	739 20	
Arresting Fugitives.....	214 00	
Publishing Governor's Proclamation.	10 00	
Hospital for Insane, East Tennessee...	8,956 09	
Hospital for Insane, Middle Tenn.,..	14,250 00	
Tax Aggregates	217 00	
Land Sales.....	1,492 00	
		\$67,396 57
Excess of Receipts.....		6,250 70
		\$73,647 27

Balance in Treasury November 1, 1884.....	\$576,987	47
Receipts for November, 1884.....	50,379	64
	<hr/>	
	\$627,367	11
Disbursements for November, 1884	47,040	82
	<hr/>	
Balance in Treasury December 1, 1884.....	\$580,326	29

RECAPITULATION OF DISBURSEMENTS FOR NOVEMBER, 1884.

State Prosecutions.....	\$13,841 63	
Interest School Fund.....	3,289 28	
Salaries, Judicial	7,041 58	
Salaries, Court of Referees.....	2,000 00	
Salaries, Executive.....	2,454 17	
Salaries, Officers of Penitentiary.....	391 65	
Salaries, Adjutant General.....	100 00	
Salaries, Librarian.....	249 99	
Salaries, Assistant Librarian.....	83 32	
Salaries, Sup't Public Instruction	332 50	
Salaries, Attorney Gen'l and Reporter	250 00	
Clerk Hire, Sec'y of State's Office.....	75 00	
Clerk Hire, Comptroller's Office.....	208 33	
Clerk Hire, Treasurer's Office.....	83 33	
Clerk Hire, Sup't Public Instruction	41 66	
Expense, Capitol.....	246 71	
Expense, Common Schools.....	14 50	
Expense, Supreme Court.....	1,102 01	
Expense, Executive.....	41 46	
Expense, Treasurer's Office.....	25 00	
Expense, Comptroller's Office	30 00	
Expense, Court of Referees.....	302 75	
Expense, Funding Board.....	83 33	
Tax Aggregate.....	264 75	
Land Sales	756 50	
Hospital for Insane, East Tenn.....	7,468 68	
Interest State Debt.....	5,751 00	
Public Printing	177 40	
State Penit'y Building, Repairs, etc....	3 00	
Lunatics to Asylum	101 97	
Refunded Revenue.....	11 07	
Arresting Fugitives.....	138 25	
Pension to Blind.....	80 00	
		\$47,040 82
Excess of Receipts.....		3,338 82
		<hr/> \$50,379 64

RECAPITULATION OF RECEIPTS FROM DECEMBER 1 to DECEMBER 19, 1884, INCLUSIVE.

Trustees.....	\$50,516 44
County Court Clerks.....	27,654 53
Circuit Court Clerks	183 48
Criminal Court Clerks.....	99 45
Chancery Court Clerks.....	330 47
Railroad State Tax.....	19,538 86
Telegraph Companies' State Tax	750 26
Insurance Companies' Tax.....	14,059 00
Redemption of Lands.....	2,049 97
	<hr/>
	\$115,182 46
	<hr/>
	\$115,182 46

RECAPITULATION OF DISBURSEMENTS FROM DECEMBER 1 TO DE-
CEMBER 19, 1884, INCLUSIVE.

State Prosecutions.....	\$11,652 39	
Interest School Fund.....	1,894 23	
Interest State Debt.....	180 00	
Salaries, Judicial.....	7,324 94	
Salaries, Court of Referees.....	1,250 00	
Salaries, Executive.....	375 00	
Salaries, Officers of Penitentiary.....	166 66	
Salaries, Adjutant-General.....	100 00	
Salaries, Superintendent Capitol.....	100 00	
Salaries, Attorney-Gen'l and Rep.....	250 00	
Expense, Supreme Court.....	88 90	
Expense, Public Arms.....	1 00	
Expense, Capitol.....	289 03	
Expense, Railroad Commissioners.....	40 08	
Expense, Library.....	59 20	
Expense, Court of Referees.....	50 00	
Expense, Treasurer's Office.....	30 00	
Expense, Comptroller's Office.....	3 00	
Expense, Sec'y of State's Office.....	10 00	
Expense, Tenn. Money, "new issue"	528 54	
Pension to Blind.....	20 00	
Hospital for Insane, East Tenn.....	19,257 19	
Bureau Ag., Stat., Mines and Im'p'n..	2,750 00	
Arresting Fugitives.....	268 95	
Lunatics to Asylum.....	92 73	
Refunded Revenue.....	257 08	
Land Sales.....	3,223 50	
Tax Aggregates.....	31 50	
Excess of Receipts.....		\$50,293 92
		64,888 54
		<hr/> \$115,182 46
Balance in Treasury December 1, 1884.....	\$ 580,326 29	
Receipts from Dec. 1 to Dec. 19, 1884, inclusive.....	151,182 46	
		<hr/> \$695,508 75
Disbursements from Dec. 1 to Dec. 19, '84, inclusive..	50,293 92	
Balance in Treasury December 20, 1884.....	\$645,214 83	

REPORT
OF
D. A. NUNN,
SECRETARY OF STATE,
TO THE
FORTY-FOURTH GENERAL ASSEMBLY,
SESSION OF 1885.



NASHVILLE:
ALBERT B. TAVEL, PRINTER TO THE STATE.
1885.

REPORT.

To the Forty-fourth General Assembly of the State of Tennessee :

GENTLEMEN: I respectfully submit herewith my report to your honorable body :

ENDOWMENT FUNDS OF LITERARY AND CHARITABLE INSTITUTIONS.

In accordance with the provisions of an Act passed April 2, 1881, and approved April 2, 1881, entitled An Act to provide for the permanent endowment funds of literary and charitable institutions, and funds held for educational purposes, there has been in the past two years, certificate issued, in lieu of bonds held, to Pythagoras Lodge No. 23, I. O. O. F., making in all, including those mentioned in my last report (one hundred and eighty-seven), one hundred and eighty-eight certificates of this character issued.

SALE OF THE HARPETH TURNPIKE.

I would further report that by the consent and approbation of the Governor and Treasurer of the State, I, as the law of 1873 directs and requires, did advertise for sale the Harpeth Turnpike road, on February 8th, 1884, and allowed the same to remain open to bids until March 10th, 1884; after the expiration of which time the sealed bids, being four in number, were, by virtue of the law, opened in the presence of the Governor, Wm. B. Bate, and Treasurer, Atha Thomas, and by us carefully examined, and upon which examination it was found that J. B. Patton, J. H. Patton & Co., being the highest and best bidders, their bid was unanimously accepted and they were notified of the same; and they upon receiving this notification, came forward and complied

with the terms of said sale, by depositing in the Treasurer's office two \$1000, bonds each ("white," "B") of the State of Tennessee, with 17 past due coupons attached, issued under an Act of 1851-2, of the General Assembly. They have since been repeatedly requested and urged to come forward in further compliance with the terms of the sale but have as yet failed to do so.

SUIT AGAINST THE N., C. & ST. LOUIS RAILWAY CO.

The suit brought by my predecessor on behalf of the State against the Nashville, Chattanooga & St. Louis Railway Company, and reported by him, is still pending in the Chancery Court at Nashville, and is being prosecuted as vigorously as possible, counsel having no doubt of a favorable result.

PRIVATE INCORPORATIONS.

Appended to this report will be found a list of incorporated companies, organized under Chapter 143, Acts of 1875, known as the "Charter Act," and acts amendatory thereof.

Respectfully submitted,

D. A. NUNN,
Secretary of State.

INCORPORATIONS

Organized under Chapter 143, Acts of 1875, known as the
 "Charter Act," and Acts Amendatory, Published
 Herein by Direction of Section 30 of said
 Charter Act.

NAME OF INCORPORATION.	County where Registered.	When registered in Secretary of State's Office	In what Book.	No. of Page.
Reed's School House.....	Greene.....	Feb. 8, 1883	G	436
The New Memphis Jockey Club Company.....	Shelby.....	" 8, 1883	G	438
Cedar Grove Academy.....	Giles.....	" 7, 1883	G	443
The Western Union Telegraph Company.....	Washington..	" 8, 1883	G	445
The Walden Ridge Coal and Iron Company.....	Hamilton.....	" 8, 1883	G	455
The Tennessee Improvement and Transportation of Company of Tennessee.....	Washington..	" 12, 1883	G	459
Taylor's School House.....	Polk.....	" 17, 1883	G	465
Nashville College for Young Ladies.....	Davidson.....	Mar. 7, 1883	G	467
Cherry Grove Institute.....	Washington..	" 8, 1883	G	470
Lawrenceburg Academy Stock Company.....	Lawrence.....	" 17, 1883	G	472
Bryan Chapel.....	Robertson.....	" 17, 1883	G	475
King's Point Town Company.....	Hamilton.....	" 20, 1883	G	473
Syleo School.....	Polk.....	" 29, 1883	G	481
Rock City Jockey Club Association.....	Davidson.....	" 30, 1883	G	482
Sulphur Spring School House.....	Decatur.....	" 31, 1883	G	486
Conservative Mutual Aid Society.....	Henderson.....	April 2, 1883	G	486
The Juniata Quarrying and Manufacturing Co.	Penn.....	" 5, 1883	G	487
Memphis Cotton Exchange Mutual Aid Ass'n..	Shelby.....	" 6, 1883	G	491
Pigeon Roost Turnpike Company.....	Shelby.....	" 7, 1883	G	495
Merchants' Jockey Club Association.....	Davidson.....	" 7, 1883	G	500
The Tennessee Central Railroad Company.....	Putnam.....	" 16, 1883	G	503
Memphis Manufacturing Company.....	Shelby.....	" 19, 1883	G	508
Union School House.....	Union.....	" 26, 1883	G	509
East Tenn. Land Agency & Immigration Bureau	Knox.....	" 23, 1883	G	510
Anderson Hat Company.....	Shelby.....	" 26, 1883	G	511
Spiritual Protective Association of Memphis..	Shelby.....	" 26, 1883	G	512
Young Men's Christian Associat'n of Memphis.	Shelby.....	" 26, 1883	G	515
Shippers' Upper Cumberland River Transportation Company.....	Jackson.....	May 9, 1883	G	518
Shiloh Seminary and School House.....	Overton.....	" 10, 1883	G	520
Trinity Academy.....	Williamson..	" 11, 1883	G	521
Citizens' Mutual Gas Company.....	Hamilton.....	" 11, 1883	G	522
Elk Valley School House.....	Campbell.....	June 5, 1883	G	523
Smith School House.....	Campbell.....	" 9, 1883	G	529
White County Agricultural and Mechanical Association.....	White.....	" 19, 1883	G	530
Harpeth Mill Warehouse Associat'n of Franklin	Williamson..	" 23, 1883	G	532
Hiwassee Seminary.....	Polk.....	" 25, 1883	G	533
The Bank of Tallahoma.....	Coffee.....	" 30, 1883	G	535
Overton County Agricultural and Mechanical Association.....	Overton.....	July 5, 1883	G	539
Woodland Mills Male and Female Common School.....	Obion.....	" 6, 1883	G	540
Zion Academy.....	Obion.....	" 11, 1883	G	542
Memphis District High School.....	Shelby.....	" 12, 1883	G	543
Maury and Hickman Turnpike Company.....	Maury.....	Aug. 11, 1883	G	550
The South Nashville Building and Mechanics' Saving Association.....	Davidson.....	" 29, 1883	G	557
Spirit of the Farm Publishing Company.....	Davidson.....	Sept. 4, 1883	G	561
Bakin Library.....	Bedford.....	" 4, 1883	G	563
Union Stock Yard and Fertilizer Company.....	Shelby.....	" 6, 1883	G	566

NAME OF INCORPORATION.	County where Registered.	When registered in Secretary of State's Office	In what Book.	No. of Page.
Watson Roofing and Paving Company.....	Davidson.....	Sept. 7, 1883	G	570
The Nashville and Hillsboro Turnpike Co.....	Davidson.....	7, 1883	G	573
Culleoka and Mooresville Turnpike Company...	Maury.....	11, 1883	G	575
Birchwood Academy.....	James.....	13, 1883	G	578
Paris Manufacturing Company.....	Henry.....	19, 1883	G	580
Spring Creek Academy.....	Madison.....	23, 1883	G	584
The Bethany Presbyterian Church, King's Point	Hamilton.....	28, 1883	G	586
Flag Pond Seminary.....	Unicoi.....	Oct. 2, 1883	G	587
The People's Self-sustaining Co-operative Association.....	Shelby.....	8, 1883	G	589
Board of Trustees of Bell Hill School.....	Cooke.....	15, 1883	G	592
Sweetwater College.....	Monroe.....	1, 1883	G	596
Russell & Decans' School House.....	Hickman.....	1, 1883	G	598
The Record Publishing Company.....	Robertson.....	2, 1883	G	600
Hatchie Academy.....	Lauderdale.....	7, 1883	G	602
Troy, Tiptonville & Pacific Railroad.....	Obion.....	15, 1883	G	604
Memphis Stockyard and Tanning Company.....	Shelby.....	16, 1883	G	607
Athenaeum Literary Society.....	McMinn.....	17, 1883	G	610
Friendship Church and School House.....	Claiborne.....	19, 1883	G	615
Maryville College.....	Blount.....	19, 1883	G	617
Mossy Creek Creamery.....	Jefferson.....	21, 1883	G	620
Mathes Cornet Band.....	Washington.....	24, 1883	G	621
The Home and Real Estate Company.....	Davidson.....	24, 1883	G	623
Memphis Metal and Wood Manufacturing Co...	Shelby.....	28, 1883	G	626
Lakeview Academy.....	Madison.....	Dec. 3, 1883	G	630
United Sons and Daughters of Abraham.....	Davidson.....	4, 1883	G	632
Lafayette Academy.....	Hardeman.....	7, 1883	G	634
Security Bank of Memphis.....	Shelby.....	8, 1883	G	636
Lewisburg Institute.....	Marshall.....	10, 1883	G	640
Lake Bluff High School.....	Obion.....	18, 1883	G	648
Jackson Street Railway Company.....	Madison.....	Jan. 5, 1884	G	650
Oakdale Junction & Knoxville Central R. R.....	Morgan.....	14, 1884	G	653
Spring Creek School House.....	Perry.....	25, 1884	G	662
Union City Furniture Company.....	Obion.....	26, 1884	G	664
Jackson Telephone Company.....	Madison.....	26, 1884	G	666
The Worthy Grand Lodge of Tennessee.....	Tipton.....	31, 1884	G	670
The Union Wood Dish Company.....	Hamilton.....	Feb. 16, 1884	G	673
The Union City Building and Loan Association.	Obion.....	19, 1884	G	677
The Memphis, Arkansas City, Vicksburg & Arkansas River Packet Company.....	Shelby.....	20, 1884	G	681
The Bank of Sweetwater.....	Monroe.....	27, 1884	G	684
The Chattanooga Society.....	Hamilton.....	29, 1884	G	688
Sweet Brier Academy.....	Rutherford.....	Mar. 9, 1884	G	692
Lookout Mountain Campmeeting Association...	Hamilton.....	13, 1884	G	700
Nashville & Edgefield Street Railroad Company	Davidson.....	18, 1884	G	704
Bible and Christian Aid Society.....	Hamilton.....	21, 1884	G	706
Kalenia College Company.....	Hamilton.....	21, 1884	G	708
Glen Mary Coal and Coke Company.....	Scott.....	21, 1884	G	714
Cornersville Colored Male and Female Institute	Marshall.....	24, 1884	G	716
The Nashville Commercial Insurance Company...	Davidson.....	25, 1884	G	721
Southern Immigration Association of America.	Davidson.....	31, 1884	G	725
The Madisonville Cemetery.....	Monroe.....	1, 1884	G	729
Flynn's Lick Seminary.....	Jackson.....	2, 1884	G	732
Central Point Academy.....	Smith.....	2, 1884	G	736
Buckingham Palace Company.....	Davidson.....	Jan. 29, 1883	H	60
The Lebanon Publishing Company.....	Wilson.....	27, 1883	H	61
Memphis Brokerage Association.....	Shelby.....	30, 1883	H	62
Odes, Mixer & Heald Zinc Company.....	Knox.....	5, 1883	H	63
Malburn Gin and Machine Company.....	Shelby.....	6, 1883	H	64
Great Falls Manufacturing Company.....	Warren.....	7, 1883	H	65
Highland River Mining Company.....	Hickman.....	20, 1883	H	66
Whig and Blade Printing Co., of Brownsville, Tennessee.....	Haywood.....	21, 1883	H	68
Butchers' Hide and Melting Association.....	Davidson.....	22, 1883	H	69
The Bejack Dry Goods Company.....	Shelby.....	23, 1883	H	70
Chattanooga Cotton Compress and Warehouse Association.....	Hamilton.....	24, 1883	H	71
Tennessee Shuttle Brick Machine Company.....	Davidson.....	Mar. 7, 1883	H	72
The New City Produce Exchange.....	Davidson.....	14, 1883	H	73
Wiley Coal Company.....	Anderson.....	19, 1883	H	74
Southwestern Real Estate Association.....	Shelby.....	24, 1883	H	75
The Tennessee and New Mexico Mining and Smelting Company.....	Davidson.....	29, 1883	H	76

NAME OF INCORPORATION.	County where Registered.	When registered in Secretary of State's Office	In what Book.	No. of Page.
The South Nashville Lumber Company.....	Davidson.....	Mar. 29, 1883	H	77
Brownspont Iron Company.....	Davidson.....	" 29, 1883	H	78
Giles County Trotting and Racing Horse Co.....	Giles.....	" 30, 1883	H	79
Memphis Wrecking Company.....	Shelby.....	" 30, 1883	H	80
Bear Creek Academy.....	Hickman.....	" 31, 1883	H	81
Chattanooga Plow Company.....	Hamilton.....	April 3, 1883	H	82
Central Warehouse and Mill Company.....	Montgomery.....	May 3, 1883	H	83
The Memphis Abstract Company.....	Shelby.....	April 4, 1883	H	84
The Citizens' Blood Horse Association.....	Davidson.....	" 16, 1883	H	85
United States Electric Light and Power Co.....	Shelby.....	" 18, 1883	H	86
Columbia Hosiery Manufacturing Company.....	Maury.....	" 19, 1883	H	87
Nashville Stone and Manufacturing Company.....	Davidson.....	" 20, 1883	H	88
Brookside Mills.....	Knox.....	" 23, 1883	H	89
The Spring City Coal, Iron and Coke Company..	Rhea.....	" 23, 1883	H	90
The Duck River Woollen Mills.....	Bedford.....	" 23, 1883	H	91
The Nashville Red Cedar Dimension Company..	Davidson.....	" 25, 1883	H	92
The Columbia Stock Yard Company.....	Maury.....	May 2, 1883	H	93
East Tennessee Coal Company.....	Knox.....	" 4, 1883	H	94
East Tennessee Ice Company.....	Knox.....	" 4, 1883	H	95
Tennessee Company.....	Davidson.....	" 5, 1883	H	96
The Merchants' Stock and Blood Horse Association.....	Davidson.....	" 8, 1883	H	97
The Warren Wagon Company.....	Warren.....	" 8, 1883	H	98
The Rock City Stock and Blood Horse Association.....	Davidson.....	" 9, 1883	H	99
Trenton Cotton Seed Oil Mills.....	Gibson.....	" 10, 1883	H	100
St. Francis River Transportation Company.....	Shelby.....	" 14, 1883	H	101
West Tennessee Land and Improvement Co.....	Shelby.....	" 14, 1883	H	102
Knoxville Fruit Drier Company.....	Knox.....	" 14, 1883	H	103
Crescent Marble Company.....	Knox.....	" 16, 1883	H	104
Bluff City Stone Works.....	Shelby.....	" 19, 1883	H	105
Columbia Water Company.....	Maury.....	" 22, 1883	H	106
Eureka Fertilizer Company.....	Shelby.....	" 22, 1883	H	107
Nashville Theater Company.....	Davidson.....	" 30, 1883	H	108
Allardt Real Estate Association.....	Fentress.....	" 31, 1883	H	109
The Planters Oil Mill Company.....	Shelby.....	" 2, 1883	H	110
Hiwassee Manufacturing Company.....	McMinn.....	" 9, 1883	H	111
Memphis Land and Timber Company.....	Shelby.....	April 25, 1883	H	112
Indiana Lumber Company.....	Davidson.....	" 26, 1883	H	113
The Memphis & White River Packet Company..	Shelby.....	June 4, 1883	H	114
Coal Creek Consolidated Coal Company.....	Knox.....	" 4, 1883	H	115
Madisonville and Sweetwater Telephone Co.....	Monroe.....	" 5, 1883	H	116
Nashville Mill Company.....	Davidson.....	" 7, 1883	H	117
City Mill and Elevator Company.....	Montgomery.....	" 8, 1883	H	118
Empire Furniture and Lumber Company.....	Davidson.....	" 8, 1883	H	119
Memphis Driving Club and Blood Horse Association.....	Shelby.....	" 18, 1883	H	120
Regina Gold and Silver Mining Company.....	Davidson.....	" 19, 1883	H	121
Chattanooga Manufacturing Company.....	Hamilton.....	" 20, 1883	H	122
The Memphis Power Company.....	Shelby.....	" 20, 1883	H	123
Centreville Hotel Company.....	Hickman.....	" 22, 1883	H	124
State Mutual Assessment Life Association.....	Hamilton.....	" 27, 1883	H	125
Rogersville Telephone Company.....	Hawkins.....	July 2, 1883	H	126
White River Packet Company.....	Shelby.....	" 9, 1883	H	127
Memphis & New Orleans Packet Company.....	Shelby.....	" 9, 1883	H	128
East Tennessee Poultry Company.....	Knox.....	" 13, 1883	H	129
Southern Time Telegraph Company.....	Davidson.....	" 14, 1883	H	130
Knoxville City Mills Company.....	Knox.....	" 18, 1883	H	131
Memphis Manufacturing and Brick Company.....	Shelby.....	" 23, 1883	H	132
Murfreesboro Roller Skating Rink and Gymnasium Club.....	Rutherford.....	" 27, 1883	H	133
Memphis Blood Horse Association.....	Shelby.....	" 30, 1883	H	134
Cumberland Stock and Blood Horse Association	Davidson.....	Aug. 1, 1883	H	135
Bellaire College.....	Shelby.....	" 2, 1883	H	136
Ayers' Building and Real Estate Association ..	Shelby.....	" 4, 1883	H	137
Nashville Merrill Pump Company.....	Davidson.....	" 4, 1883	H	138
Nashville Bending Works.....	Davidson.....	" 7, 1883	H	139
Ayers' Block and Real Estate Company.....	Shelby.....	" 11, 1883	H	141
Tullahoma Woollen Mills.....	Coffee.....	" 18, 1883	H	142
Arlington Insurance Company.....	Shelby.....	" 20, 1883	H	143
Tullahoma High School.....	Coffee.....	" 24, 1883	H	144
Buffalo River Iron and Lumber Company.....	Davidson.....	Sept. 8, 1883	H	145
Greenbrier Lake Club.....	Wn.....	Aug. 30, 1883	H	146

NAME OF INCORPORATION.	County where Registered.	When registered in Secretary of State's Office	In what Book.	No. of Page.
Nashville Copper Company.....	Davidson.....	Sept. 3, 1883	H	147
Athens Furniture Works.....	McMinn.....	" 6, 1883	H	148
Southern Miller Publishing Company.....	Davidson.....	" 12, 1883	H	149
Novelty Foundry Company.....	Davidson.....	" 12, 1883	H	150
Johnson City Real Estate Company.....	Washington.....	" 14, 1883	H	151
Gibson County Agricultural and Mechanical Association.....	Gibson.....	" 18, 1883	H	152
Safe Deposit, Trust and Banking Company.....	Davidson.....	" 27, 1883	H	153
University Hotel Company.....	Franklin.....	Oct. 1, 1883	H	154
Sequatchie Real Estate Immigration Company.....	Marion.....	" 13, 1883	H	155
The Gayoso Club.....	Shelby.....	" 15, 1883	H	156
Arkansas Manganese Mining Company.....	Davidson.....	" 16, 1883	H	157
Enterprise Soap Market.....	Davidson.....	" 22, 1883	H	157
The American Brick Machine Company.....	Davidson.....	" 16, 1883	H	158
The Chattanooga Chair Company.....	Hamilton.....	" 31, 1883	H	159
Nashville Manufacturing Company.....	Davidson.....	Nov. 9, 1883	H	160
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FIRST AND SECOND ANNUAL REPORTS

OF THE

RAILROAD COMMISSIONERS

FOR THE

STATE OF TENNESSEE.

COMMISSIONERS:

JOHN H. SAVAGE,
G. W. GORDON,
J. A. TURLEY.

NASHVILLE, TENN.,
ALBERT B. TAVEL, PRINTER TO THE STATE.
1884.

RAILROAD COMMISSION LAW.

A BILL to be entitled An Act to provide for the regulation of railroad companies, and persons operating railroads in this State; to prevent discrimination upon railroads in this State; and to provide for the punishment for the same; and to appoint a Railroad Commission.

SECTION 1. *Be it enacted by the General Assembly of the State of Tennessee*, That the main track and all the branches of every railroad in this State is a public highway, over which all persons have equal rights of transportation for passengers and freights, on the payment of just and reasonable compensation to the owner of the railroad for such transportation; and any person or corporation engaged in the business of transporting passengers or freights over any railroad in this State who shall exact and receive for any such transportation more than just and reasonable compensation for the services rendered, or demand more than the rates specified in any bill of lading issued by such person or corporation, or who for his or its advantage, or for the advantage of any connecting line, or of any person or locality, shall make any unjust and unreasonable discrimination in transportation against any individual, locality or corporation, shall be guilty of extortion, and in every case it shall be for the jury to determine from all the evidence whether more than just and reasonable compensation was exacted and received, or whether any such discrimination in transportation which may be established by the evidence against the individual, locality or corporation, as the case may be, was made for the benefit or advantage of the person or corporation operating such railroad, or of any person or locality: *Provided*, that nothing in this Act shall be construed to prevent contracts for special rates for the purpose of developing any industrial enterprise, or to prevent the execution of any contract now existing.

SEC. 2. *Be it further enacted*, That the party injured may recover of the person or corporation guilty of extortion, as defined in this Act, ten times the amount of damages sustained by the over-

charge or unjust discrimination, as the case may be, and a reasonable fee for the counsel prosecuting the case in any court having jurisdiction of the amount, in any county, where the person or corporation operating the railroad does business; but if it appears that the service in which the extortion was committed was done at rates or upon terms previously approved by the Railroad Commission hereinafter established, only actual damages, and no attorney's fee shall be recovered.

SEC. 3. *Be it further enacted*, That it shall be the duty of the commission to investigate and determine whether the provisions of this bill have been violated; and whenever said commissioners shall become satisfied that any railroad corporation has violated any of the provisions of this Act, they shall immediately cause suit or suits to be commenced and prosecuted against any railroad corporation guilty of such violation in any court having jurisdiction of the subject matter. Said suit shall be prosecuted in the name of the State of Tennessee, and conducted by the Attorney General of the judicial circuit in which the same is instituted, under the direction of said commissioners, and no suit so instituted shall be dismissed without their consent; all moneys so collected shall be paid into the State Treasury. If upon the trial of any cause for the recovery of the penalties provided in this bill the jury shall find for the State, they shall assess and return with their verdict the amount of the penalty to be imposed on the defendant at any amount not less than \$100, nor more than \$1,000, and the court shall render judgment accordingly.

SEC. 4. *Be it further enacted*, That in all suits or proceedings under this statute the defendant may give in evidence the fact that the rates or terms in respect to which extortion is alleged had been previously approved by the Railroad Commission hereinafter established, and such approval shall be *prima facie* evidence that such rates or terms were not extortionate.

SEC. 5. *Be it further enacted*, That no rates or charges for service in the transportation of freight over any railroad shall be held or considered extortionate or excessive under any proceeding under this Act, if it appears from the evidence that the net earnings of such railroad transporting freight, if done without such discrimination on the basis of such rate or charge, together with the net earnings from its passenger and other traffic, would not amount to

more than a fair and just return on the value of which such railroad with its appurtenances and equipments to be assessed for taxation.

SEC. 6. *Be it further enacted*, That all actions to recover damages under this Act shall be commenced within six months after the cause of action accrues.

SEC. 7. *Be it further enacted*, That the foregoing sections of this Act shall not take effect until the first day of July, 1883.

SEC. 8. *Be it further enacted*, That it shall be the duty of all persons or corporations in this State, who shall own or operate any railroad therein, to publish by posting at all the depots the tariffs of rates, which have been approved by said Commission, for transporting freights, showing the rates for each class, including general and special rates, and it shall be unlawful for such person or corporation to make any reduction or rebate from such tariff in favor of any person or corporation which shall not be made in favor of all other persons or corporations by a change in such published rates.

SEC. 9. *Be it further enacted*, That it shall be unlawful and within the prohibition of this Act for any railroad corporation, doing business in this State, to make any contract, agreement or arrangement with any other railroad corporation, or with any common carrier by water in respect to the transportation of freights of any description, from any place within this State by which it is to transport only a certain portion of such freights or by which it is to refuse to transport such freights or any portion thereof, or by which any common carrier, by water is to refuse to transport such freights or any portion thereof, or by which it is to receive any sum of money or anything of value for not transporting all or any part of such freights, or by which it is to pay any sum of money, or part with anything of value as an inducement to any other railroad corporation or common carrier by water, not to compete with it in the transportation of such freights, or by which it and other railroad corporations or common carrier, by water, distribute among themselves for transportation according to percentages, any freights offered for shipment; and railroad corporations are required to remove freights when delivered or offered for shipment to the extent of their facilities without unnecessary delay and without regard to any contract, agreement or arrangement expressed or implied as

aforesaid, and all railroad corporations refusing or neglecting so to do are hereby declared to be subject to the penalties imposed by this Act.

SEC. 10. *Be it further enacted*, That this Act shall not prevent any railroad company from transporting freight free of charge, provided it is not done to evade the provisions of this act.

SEC. 11. *Be it further enacted*, That it shall be the duty of the Governor to nominate three competent persons, one from each grand division of the State, subject to the confirmation of the Senate, if in session, who shall constitute the Railroad Commission of the State of Tennessee, and the Commissioners, after qualifying, as prescribed in section 11 of this Act, shall proceed to elect one of their number as President and one as Secretary; and said Commissioners shall hold their offices until the first day of January, 1885, and their successors shall be elected by the qualified voters of the State at the November election in 1884, and every two years thereafter.

SEC. 12. *Be it further enacted*, That said Railroad Commissioners shall be State officers, and before entering on their duties shall take the oath of office prescribed for other State officers, and may be impeached and removed from office for the same causes and in the same manner as other State officers. They shall hold office for two years and until their successors respectively are duly elected or appointed and qualified, and any vacancy shall be filled by the Governor; the person so appointed shall hold office until his successor is duly appointed, confirmed and qualified as above provided. No person in the employ of any railroad corporation, or other person owning or operating a railroad in this State, or owning any stock in any railroad corporation, shall be nominated by the Governor as a member of such Commission, and any Commissioner who shall accept any gift, gratuity or emolument, or employment from any person or corporation owning or operating a railroad in this State, during his continuance in office, except a permit for himself to pass over the railroad of such person or corporation, shall forfeit his office and may be impeached and removed from office for that cause, as well as any of the causes specified by law for the impeachment of other State officers.

SEC. 13. *Be it further enacted*, That it shall be the duty of the Commission to consider and carefully revise all tariffs of charges

for transportation of any person or corporation owning or operating a railroad in this State, and if in the judgment of the Commission any such charge is more than just and reasonable compensation for the service for which it is proposed to be made, or if any such charges amount to unjust and unreasonable discrimination against any person, locality or corporation, the Commission shall notify the person or corporation of the changes necessary to reduce the rate of charges to just and reasonable compensation and to avoid unjust and unreasonable discrimination ; when such changes are made or when none are deemed proper and expedient, the members of the Commission shall append a certificate of its approval to such tariff or charges, and in case such change shall not be made, or if any charge subsequently made shall not conform thereto, said corporation shall be held *prima facie* guilty of extortion.

SEC. 14. *Be it further enacted*, That it shall be the duty of said Commission to hear all complaints made by any person against any such tariff or rates so approved, on the ground that the same in any respect is for more than just and reasonable compensation, or that such charges, or any of them, amount to or operate so as to effect unjust and unreasonable discrimination, such complaint must be in writing and specify the items in the tariff against which complaint is made, and if it appears to the Commission that there may be justice in the complaint, or that the matters ought to be investigated, the Commission shall forthwith furnish to the person or corporation operating the railroads a copy of the complaint together with notice that, at a time and place stated in the notice, the tariff as to said items will be revised by the Commission, and at such time and place it shall be the duty of the Commission to hear the parties to the controversy, or by counsel, and such evidence as may be offered, oral or in writing, and may examine witnesses on oath, conforming to the mode of proceedings as nearly as may be convenient to that required of arbitrators, giving such time and latitude to each side, and regulating the opening and conclusion of any argument as the Commission may consider best adapted to arrive at the truth, and when the hearing is concluded, the Commission shall give notice of any changes deemed proper by them to be made, to the person or corporation operating the railroad. And any subsequent charge higher than the amount fixed shall be *prima facie* evidence of extortion. And all railroad companies or persons ope-

rating railroads in this State shall make out and deliver for revision to the Commissioners a schedule of their rates of charges for the transportation of freights, cars and passengers, within twenty days after the President or Superintendent is notified by the Commissioners that they are ready to consider the same, and on failure to do so said railroad company, or other persons so operating said railroad, shall be liable to a fine of \$100 for every day of said failure after the expiration of said twenty days; and said railroad company or other persons operating any railroad shall have the right to appear and make such proof as they may desire in regard to revision by said Commissioners, under such regulations as the Commissioners may prescribe.

SEC. 15. *Be it further enacted*, That said Commission shall have an office at the Capitol, and shall meet there on the first Monday in every month, and shall remain in session until all business before them is disposed of; and shall hold other sessions at such times and places as may be necessary for the proper discharge of their duties, or as the convenience of parties in the judgment of the Commission may require. The members of said Commission shall each receive a salary of two thousand dollars, unless restrained by law from the performance of their duties, to be paid as the salaries of the other State officers. It shall be the duty of the Commission to keep a record of all its proceedings, which shall be open at all times to the inspection of the public.

SEC. 16. *Be it further enacted*, That all money paid out under this act shall be paid on warrant of the Comptroller to the Treasurer, as by law provided, including such sum as may be necessary to procure office furniture, stationery and other office expenses, including rent of office of said Commission; provided that such office expenses shall not exceed five hundred dollars per annum.

SEC. 17. *Be it further enacted*, That whenever in the judgment of the Railroad Commission, it shall appear that repairs are necessary upon any such railroad, or that any addition to the rolling stock, or any addition to or change of the station or station houses, or any change in the rates of fares for transporting freight or passengers, or any change in the mode of operating the road and conducting its business, is reasonable and expedient in order to promote the security, convenience and accommodation of the public, they shall give information in writing to the corporation of the improve-

ments and changes which they adjudge to be proper, and a report of the proceedings shall be included in the annual report of the Commission to the Legislature.

SEC. 18. *Be it further enacted*, That the said Commissioners shall have the right to pass free of charge in the performance of their duties on all the railroads in this State. That said Commissioners shall have general supervision over all the railroads of Tennessee, and shall examine the same from time to time, and keep themselves informed as to their condition, and the manner in which they are operated with reference to the security and accommodation of the public, and the compliance of the several corporations with their charters and the laws of the State.

SEC. 19. *Be it further enacted*, That said Commission shall, as often as they deem it necessary, examine the several railroads in this State, and shall recommend in writing to the several railroad companies, or any of them, from time to time, the adoption of such measures and regulations, as said Commissioners deem conducive to the public safety and interest.

SEC. 20. *Be it further enacted*, That the managers operating the several railroads of this State shall furnish the said Commission with all the information required, relative to the management of their respective lines, and particularly with copies of all leases, contracts and agreements for transportation with express, sleeping-car, or other companies, to which they are parties, with schedules of tariff rates.

SEC. 21. *Be it further enacted*, That the several railroad companies, trustees or receivers, or other persons operating railroads in this State, be and are hereby required to make annual returns of their business to the Board of Commissioners on or before the 1st day of September of each year, made up to the close of business on the 30th day of June next preceding, which annual returns shall be made in duplicate, in the manner prescribed by said Commissioners, upon the blank forms to be furnished by said Commissioners to said railroad companies. Any railroad company which shall neglect or refuse to make such returns shall forfeit to the State \$100 for each day of such refusal or neglect.

SEC. 22. *Be it further enacted*, That every railroad company shall, within twenty-four hours after the occurrence of any accident to a train, attended with serious personal injury on any portion of

its line within the limits of the State, give notice of the same to the Railroad Commissioners, who, upon receiving such notice, or upon public rumor of such accident, may repair, or despatch one or more of their number to the scene of said accident, and inquire into the facts and circumstances thereof, which shall be recorded in the minutes of their proceedings and embraced in their annual report.

SEC. 23. *Be it further enacted,* That the said Commissioners may summon and examine under oath such witnesses as they may think proper in relation to the affairs of any railroad company.

SEC. 24. *Be it further enacted,* That the Board, through their Chairman, shall make annual reports to the Governor, on or before the first day of December in each year, for transmission to the Legislature, of their doings for the year ending on the 30th day of June next preceding, containing such facts as will disclose the actual workings of the railway system in this State, and such suggestions as to the general railroad policy of the State, as may seem to them appropriate. They shall also submit such recommendations for further legislation upon the subjects of railroads as they may deem necessary or advisable for the interests of the State.

SEC. 25. *Be it further enacted,* That the Railroad Commissioners shall have at all times access to the list of stockholders of every corporation operating a railroad in this State, and may in their discretion at any time cause the same to be copied in whole or in part for their own information, or for the information of persons owning stock in such corporations.

SEC. 26. *Be it further enacted,* That it shall be the duty of the Railroad Commission, by correspondence, conventions or otherwise, to confer with the Railroad Commissioners of other States of the Union, and with such persons from States having no Railroad Commissioners, as the Governor of such States may appoint, for the purpose of agreeing, if practicable, upon a draft of statutes to be submitted to the Legislature of each State, which shall secure such uniform control of railroad transportation in the several States, and from one State into or through another State, as will best subserve the interest of trade and commerce of the whole country; and said Commission shall include in their annual report to the Governor an abstract of the proceedings of any such conference or convention.

SEC. 27. *Be it further enacted*, That no person holding the office of Railroad Commissioner shall, during his continuance in office, personally or through any partner or agent, render any professional services, or make or perform any business contracts with or for any railroad owned or operated in this State, excepting contracts made with such railroad in its capacity as common carrier.

SEC. 28. *Be it further enacted*, That nothing in this act contained shall be construed to affect in any manner or degree the legal duties, rights and obligations of any railroad corporation or other person owning or operating any railroad in this State, or its legal liability for the consequences of its neglect or mismanagement, whether adjudged by said Commission to be reasonable, expedient and proper or not.

SEC. 29. *Be it further enacted*, That none of the provisions of this act shall apply to any railroad now being constructed, or which may hereafter be begun and constructed in this State, until ten years from and after the completion of such new railroad.

SEC. 30. *Be it further enacted*, That witnesses summoned to appear before said Commission shall be entitled to the same *per diem* and mileage as witnesses attending the Circuit Court; witnesses summoned by the Commissioner shall be paid by warrant on the treasury, to be drawn by the Comptroller on the certificate of the President of the Board of the amount to which such witness is entitled. Witnesses summoned by any party to be paid by the party by whom they are summoned. And the Commissioners are hereby clothed with the same power to enforce the attendance of witnesses as is now possessed by any court of record.

SEC. 31. *Be it further enacted*, That this Act take effect from and after its passage, the public welfare requiring it.

Passed March 29, 1883.

W. L. LEDGERWOOD,

Speaker of the House of Representatives.

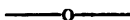
B. F. ALEXANDER,

Speaker of the Senate.

Approved March 30, 1883.

WM. B. BATE, *Governor.*

FIRST ANNUAL REPORT.



OFFICE OF THE RAILROAD COMMISSION OF THE
STATE OF TENNESSEE,
NASHVILLE, DECEMBER 1, 1883. }

To his Excellency, WILLIAM B. BATE, Governor of the State of Tennessee :

The 24th section of the law passed by the last General Assembly, entitled "An Act to provide for the regulation of railroad companies, and persons operating railroads in this State; to prevent discrimination upon railroads in this State; and to provide for the punishment for the same; and to appoint a Railroad Commission," is as follows:

SEC. 24. *Be it further enacted*, That the Board, through their Chairman, shall make annual reports to the Governor, on or before the 1st day of December in each year, for transmission to the Legislature, of their doings for the year ending on the 30th day of June next preceding, containing such facts as will disclose the actual workings of the railway system in this State, and such suggestions as to the general railroad policy of the State as may seem to them appropriate. They shall also submit such recommendations for further legislation upon the subject of railroads as they may deem necessary or advisable for the interests of the State.

As required by this law, we respectfully submit a report of our doings for the year ending 30th June, 1883, beginning at the date of our qualification as Commissioners, April 25th, 1883.

The Commissioners, after receiving their commissions from your Excellency, met at Nashville, on the 25th of April, 1883, took the oath of office prescribed by law, and organized by electing John H. Savage, President, and G. W. Gordon, Secretary of the Commission.

On the 26th of April, 1883, the Secretary was directed to address the following letter to the representatives of the various railroads in the State :

OFFICE OF RAILROAD COMMISSION OF TENNESSEE, }
NASHVILLE, TENN., April 26th, 1883. }

DEAR SIR:—In obedience to section 14 of an act entitled “An act to provide for the regulation of railroad companies, and persons operating railroads in this State, to prevent discrimination upon railroads in this State, and to provide for the punishment of the same, and to appoint a Railroad Commission,” passed by the General Assembly of Tennessee, March 29th, and approved March 30th, 1883, the Railroad Commission appointed in pursuance of said act, hereby respectfully notify and request you to make out and deliver to us for revision a schedule of the rates of charges for the transportation of freights, cars and passengers over the _____ Railroad, and over all branches or lines of railroads owned, controlled, managed or operated by your company, as required by the act aforesaid, within twenty days from the receipt of this notice, the Commission being now ready to consider the same. Please find, herewith enclosed, a copy of the act referred to.

By direction of the Board.

JNO. H. SAVAGE, *President.*

G. W. GORDON, *Secretary.*

On the 27th, the Secretary reported that a copy of the foregoing letter had been addressed by mail to the Presidents or Superintendents of the following roads, to-wit:

Chicago, St. Louis & New Orleans; Chesapeake, Ohio & South-western; Cincinnati, Cumberland Gap & Charleston; Duck River Valley; Mobile & Ohio; Louisville, Nashville & Great Southern; Knoxville & Ohio; Cincinnati, New Orleans & Texas Pacific; Memphis & Charleston; East Tennessee, Virginia & Georgia; Nashville & Florence; Rogersville & Jefferson; Mississippi & Tennessee; Ship Island, Ripley & Kentucky; Western & Atlantic; Tennessee Coal & Iron Railroad; Nashville, Chattanooga & St. Louis.

On the 28th of April, the Commission directed the Secretary to address copies of the following letter to the Presidents and Superintendents of the railroads in Tennessee :

OFFICE OF RAILROAD COMMISSION OF TENNESSEE, }
 NASHVILLE, TENN., April 28th, 1883. }

To _____, *Pres't or Sup't* _____ *Railroad* :

DEAR SIR:—The undersigned, having been appointed Railroad Commissioners for Tennessee, by the Governor of the State, in conformity to a recent act of the Legislature, beg to inform you that they have qualified, as the law provides, and are now engaged in the performance of their duties as such Commissioners, at their office in the city of Nashville. Their official duties require them to pass frequently over the various railroads in the State, and as the law under which they are acting, provides that said Commissioners shall have the right to pass free of charge, in the performance of their duties, on all the railroads in this State (see sec. 18 of said act), we respectfully request you to furnish us with passes, or other evidence by which we may pass over your road and its branches without molestation ; or instruct your conductors to pass us.

Very respectfully,

JNO. H. SAVAGE,
 J. A. TURLEY,
 G. W. GORDON.

Upon the meeting of the Commission, on the first Monday in May, 1883, the Secretary reported that he had addressed, through the mail, a copy of the letter directed by the Commission, at its last meeting, to be addressed to the Presidents or Superintendents of the various railroads doing business in the State, to the Presidents or Superintendents of the following railroads, to-wit :

Gov. Jas. D. Porter, President Nashville, Chattanooga & St. Louis railroad ; R. B. Pegram, Esq., Superintendent Memphis & Charleston railroad ; Col. M. Burke, Superintendent Mississippi & Tennessee railroad ; E. S. Hosford, Superintendent Mobile & Ohio railroad ; W. R. Ackerman, President Chicago, St. Louis & New Orleans railroad ; M. H. Smith, Vice-President and General Superintendent Louisville, Nashville & Great Southern railroad ; D. W. C. Brown, General Superintendent Chesapeake, Ohio & Southwestern railroad ; C. M. McGhee, Vice-President and General Manager East Tennessee, Virginia & Georgia railroad ; Geo. H. Nixon, President Nashville & Florence railroad ; C. B. Wallace, Superin-

tendent Alabama & Great Southern railroad; H. M. Aiken, Esq., President Rogersville & Jefferson railroad; Jno. Scott, President Cincinnati, New Orleans & Texas Pacific railroad; Col. B. A. Anderson, Superintendent Western & Atlantic railroad.

The Secretary also reported that he had addressed letters on behalf of the Commission, to the Railroad Commissioners of the following States, requesting them to favor this Commission with a copy of their official reports as Commissioners; also any published rulings they may have made as such, together with any other documents that would tend to aid this Commission in its work, to-wit: Michigan, Missouri, Illinois, Massachusetts, New York and Georgia, and that he had received responses from the Commissions of four of said States, together with copies of the documents asked for.

It also appeared that the schedule of rates of charges for the transportation of freights, cars and passengers, as requested by the letter of this Commission of the 26th of April, had been received from the Western & Atlantic railroad, and from the Mississippi & Tennessee railroad. The Secretary also reported that passes for each member of this Commission had been received from the Mississippi & Tennessee, the Western & Atlantic, and the Illinois Central railroads, in compliance with the request of the Commission, addressed to said roads April 28th, 1883.

On May 9th, the Secretary reported that the schedule of rates for transportation of freights and passengers over the Chicago, St. Louis & New Orleans railroad had been received from the Mobile & Ohio railroad.

First Monday in June, 1883, the Secretary reported that passes had been received from Cincinnati, New Orleans & Texas Pacific railroad; also freight tariffs of said road between stations in this State; also classification and tables of freight and passengers from the Rogersville & Jefferson railroad; also copies of special rates on the Mississippi & Tennessee railroad; also passenger and freight tariff, and passes for the Commission from the East Tennessee, Virginia & Georgia railroad; also freight and passenger tariff, and passes for the Commission from the Chesapeake, Ohio & Southwestern railroad.

It will appear from the foregoing that all the leading railroads in the State, except the Nashville, Chattanooga & St. Louis rail-

road, furnish the schedule for the rates of charges for freights and passengers, as requested, which road, up to date of this report, has wholly failed and refused so to do.

We submit below such items taken from the annual reports of the various railroads doing business in the State, made to this Commission for the fiscal year ending June 30th, 1883, as we think will be of interest and importance to the public.

ILLINOIS CENTRAL RAILROAD.

Whole length of line from East Cairo to New Orleans,

Louisiana.....	548 ⁸ / ₁₀ miles.
Length in Tennessee.....	116 ⁴² / ₁₀₀ miles.
Total income.....	\$3,850,676 83
Total expenses (including taxes).....	2,537,442 58
Net income.....	1,313,234 25
Gross earnings per mile of road.....	6,648 27
Total expenses per mile of road.....	4,476 78

LOUISVILLE & NASHVILLE RAILROAD.

Length of main lines.....	701 ³² / ₁₀₀ miles.
Length in Tennessee.....	387 ⁴⁸ / ₁₀₀ miles.
Total income.....	\$13,397,750 03
Total expenses (including taxes).....	8,439,004 93
Net income.....	4,958,745 10
Total earnings per mile of road.....	6,526 10
Net earnings per mile of road.....	3,880 10

EAST TENNESSEE, VIRGINIA & GEORGIA RAILROAD.

Whole length of line from Bristol, Tennessee, to

Lauderdale, Mississippi.....	571 miles.
Length in Tennessee.....	225 miles.
Total earnings.....	\$3,776,754 00
Total expenses (including taxes).....	3,066,412 96
Net income.....	710,341 04
Total earnings per mile of road.....	4,191 74
Total expenses per mile of road.....	2,645 62

MEMPHIS & CHARLESTON RAILROAD.

Whole length of line from Memphis, Tennessee, to

Stevenson, Alabama.....	272 miles.
Length in Tennessee.....	85 ⁷⁵ / ₁₀₀ miles.

Total income.....	\$1,236,023 09
Total expenses (including taxes).....	845,498 03
Net income.....	390,525 06
Total income per mile of road.....	3,745 52
Total expenses per mile of road.....	2,562 11

MISSISSIPPI & TENNESSEE RAILROAD.

Whole length of line from Memphis, Tennessee, to

Grenada, Mississippi.....	100 ⁷⁵ / ₁₀₀ miles.
Length in Tennessee.....	11 ²⁵ / ₁₀₀ miles.
Total income.....	\$501,908 35
Total expenses (including taxes).....	426,402 56
Net income.....	75,505 79
Total earnings per mile of road.....	5,019 08
Total expenses per mile of road.....	4,264 02

WESTERN & ATLANTIC RAILROAD.

Whole length of line from Atlanta, Georgia, to

Chattanooga, Tennessee.....	138 miles.
Length in Tennessee.....	16 ⁷⁵ / ₁₀₀ miles.
Total income.....	\$1,365,134 04
Total expenses (including taxes).....	1,131,095 67
Net income.....	234,038 37
Total earnings per mile of road.....	9,892 85
Total expenses per mile of road.....	8,196 34

MOBILE & OHIO RAILROAD.

Whole length of line from Mobile, Alabama, to

Cairo, Illinois. ...	493 miles.
Length in Tennessee.....	119 miles.
Total income.....	\$2,271,058 66
Total expenses (including taxes).....	1,642,651 91
Net income.	628,406 75
Total earnings per mile of road.....	4,606 61
Total expenses per mile of road.....	3,113 90

CHESAPEAKE, OHIO & SOUTHWESTERN RAILROAD.

Whole length of line from Cecilia, Kentucky, to

Memphis, Tennessee.....	345 ²²¹ / ₁₀₀₀ miles.
Length in Tennessee.....	120 ⁵³ / ₁₀₀₀ miles.

Total income.....	\$1,177,131 36
Total expenses (including taxes)	976,750 21
Net income.....	200,380 52
Total earnings per mile of road.....	2,939 14
Total expenses per mile of road.....	2,305 74

CINCINNATI, NEW ORLEANS & TEXAS PACIFIC RAILROAD.

Whole length of line from Cincinnati, Ohio, to

Chattanooga, Tennessee.....335⁸⁷⁹ miles.

Length in Tennessee.....137⁴³⁷ miles.

Total income.....\$2,547,162 91

Total expenses (including taxes)..... 2,535,696 13

Net income..... 11,466 78

Total earnings per mile of road..... 7,580 84

Total expenses per mile of road.. 5,130 05

ROGERSVILLE & JEFFERSON RAILROAD.

Whole length of line from Rogersville, Tennessee, to

Rogersville Junction, on the E. T., Va. & Ga. R. 15⁷⁰ miles.

Length in Tennessee.....15⁷⁰ miles.

Total income.....\$16,365 79

The President and owner of this road reports that he has "turned the earnings of the road (except his family's living) back into it."

JOHN H. SAVAGE, *President*.

G. W. GORDON, *Secretary*.

SUPPLEMENTAL REPORT.

OFFICE OF THE RAILROAD COMMISSION, }
NASHVILLE, TENN., Dec. 20, 1883. }

Subsequent to date of this foregoing report, (June 30th, 1883) viz., August 9th, 1883, the Commission addressed another letter to Gov. Jas. D. Porter, President of the Nashville, Chattanooga & St. Louis railroad, requesting said Railway Company to furnish the Commission a schedule of the rate of charges for the transportation of freight cars and passengers over said road, to which he replied in the following letter :

NASHVILLE, TENN., August 9th, 1883.

GENTLEMEN :—I am, in receipt of your communication of the 8th inst., requesting me to make out and to deliver to you for revision “a schedule of the rate of the charges for the transportation of freight, cars and passengers over the Nashville, Chattanooga & St. Louis railroad.”

In reply, I respectfully refer you to an act passed by the General Assembly of Tennessee, on the 11th day of December, 1845, entitled an act to incorporate the Nashville & Chattanooga Railroad Company, section 14 of which provides that “The Company shall have the exclusive right of transportation or conveyance of persons, goods, merchandise and produce over the said railroad, by them to be constructed, provided that the charge of transportation or conveyance shall not exceed thirty five cents per one hundred pounds on heavy articles, and ten cents per cubic foot on articles of measurement, for every hundred miles; and five cents a mile for every passenger. “In my opinion, this section is a protection against any interference with the management of the freight and passenger business of this company, so long as the charges do not exceed the maximum therein fixed. I cannot, therefore, comply with your request to furnish you with a schedule of the rate of charges for revision, but I assure you that the management of this company will receive any suggestions you may offer upon this subject in a kindly spirit, and will give it a frank and fair consideration, and adopt any recommendation you may make that will promote the interests of the public, that is not inconsistent with the rights and existence of this company. I have the honor to be,

Very respectfully,

JAS. D. PORTER, *President.*

To Messrs. Savage, Turley, Gordon, Railroad Commissioners.

The Commissioners, after considering the law in all its bearings, realized the difficulty and magnitude of the task before them. Here was an important law, containing thirty-one sections affecting capital to a greater extent, and more interests than any law ever passed by a Tennessee Legislature. This law had passed over bitter opposition in and out of the General Assembly. The policy had its friends and its enemies in every sphere of life, including farmers, judges, legislators, lawyers and business men. It was the habit of

some railroad officials and their organs, to speak of the law as a nullity, and of the Commissioners as powerless to regulate their operations in any manner whatever, and to whose requests and rulings, they should pay no regard, except as a matter of personal courtesy. There were also persons who supposed the Commissioners had the power, and it was their duty to act immediately, and to remedy all wrongs, and remove all complaints by the people, and reform the whole system of railroad management in a very short time. There were others who predicted that the Commissioners, without proper knowledge or consideration, would rashly venture upon experiments and rulings to the injury and embarrassment of the railroads, and to the disturbance of business and commerce. Others expressed the opinion that the law was faulty and deficient, and that the Commissioners were not vested with powers sufficient to accomplish any good to the people, and that it would result in a failure; that it was necessary to enact a law, by some future Legislature, giving the Commissioners power to compel obedience to all their rulings, in order to protect the people against the discriminations, extortions and arbitrary acts of railroad officials. These opinions and other opinions are not mentioned to be discussed, approved or condemned, but only to show that here was a new policy inaugurated by the State, and that the Commissioners have had before them the difficult task of putting a proper construction upon, and enforcing the provisions of the law in a manner to meet the just expectations of the people, over the protests and opposition of railroad officials, supported by able attorneys, whose arguments appeared almost daily in leading public journals.

It is deemed proper here to state that the first object of the Commissioners, after their qualification, on the 25th of April last, and their action hereinbefore mentioned, was to ascertain the extent of their powers, duties and responsibilities under the law. And after a careful examination and analysis of the law creating the Commission, we felt that we were invested with large powers, charged with important duties, and entrusted with great responsibilities. And being for the most part, then, unfamiliar with the duties we were called on to perform, our next object was to acquaint ourselves with such duties as rapidly as practicable, and by all the sources of information accessible to us ; we therefore, at once, supplied ourselves with the official reports of the Commissioners of a

number of other States, and especially those of Missouri, Illinois, Massachusetts, Michigan, Georgia, South Carolina and Alabama, some of these reports extending through a period of fourteen years, and from which we derived much valuable information. We also conversed with railroad experts upon the subject of railway transportation; the greatest problem before us; also visited almost every important shipping point in the State, and conversed with and obtained the views of shippers on the subject. And after thus studying and investigating the question from all accessible sides, for several months, we began the preparation of a "basis," as we termed it, of rates by which to formally revise the tariffs of the various roads in the State, as the law directed and required us to do. After the first "basis" was so prepared, upon a further and fuller consideration of the same, we were of the opinion that the rates named in such "basis" were too high upon some articles and too low upon others, and we therefore rejected that "basis" and prepared another, making such changes therein as said further study and examination had suggested. And this second "basis" we submitted to certain prominent railroad officials in the State for their examination and for their opinions thereon, and said officials, for the most part approved said proposed rates. But upon certain classifications in the proposed rates, they were of the opinion that the rates were too low, and so informed us, and at the same time suggested certain changes in some of the classifications, we having made twenty-four classifications. We made the changes suggested in the classifications, and to some extent in the rates that were deemed by said officials too low, and these changes were incorporated into a third basis. We were now ready to proceed with a formal revision of the tariffs of the roads. This was about the 4th of December, 1883. On that day the Commissioners notified the Louisville and Nashville Railroad Company that we would proceed to revise their tariffs on the 13th of that month, as the law directed, and that said company would, on that day, have an opportunity to make such proofs as they might desire in regard to such revision. And on that day, December 13th, we were notified by the attorney of that road, by a telegram from Columbus, Ohio, that Judge John Baxter, United States Circuit Judge, had granted an order restraining us from interfering in any wise with the tariffs of said road, under the law appointing us Commissioners. We received a similar notifica-

tion the same day from the attorney of the East Tennessee, Virginia & Georgia Railroad Company, that said Company had also enjoined the Commissioners from taking any action in regard to the tariffs of that road.

We deem it proper, further, to say that it has been the policy and intention of this Commission (and fully made known to the railroad officials) to take no step affecting the interests of the railroads without notifying them in advance, and giving them ample opportunity to give the Commissioners all the light and information in regard thereto that they might desire.

Respectfully submitted,

JOHN H. SAVAGE,
G. W. GORDON,
J. A. TURLEY,
Commissioners.

SECOND ANNUAL REPORT.

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OFFICE OF RAILROAD COMMISSION OF TENNESSEE, }
NASHVILLE, December 1, 1884.

To His Excellency, WM. B. BATE, Governor :

We respectfully submit this, our Second Annual Report. In the supplement to our first report hereto prefixed, we referred to the litigation which had been commenced against the Commissioners by the Louisville & Nashville and the East Tennessee, Virginia & Georgia Railroad Companies, seeking to restrain the Commissioners from executing the law, known as the Railroad Commission Act of 1883. Bills were filed by these companies against the Commissioners in the United States Circuit Court at Nashville, in December, 1883, and motions made for injunctions. The motions were heard by said court on the 11th of January, 1884, judges Baxter, Key and Hammond presiding. After able and elaborate arguments by counsel on both sides, the court took the cases under advisement, and on the 29th of February, delivered an opinion, holding certain sections of the Commission law unconstitutional, and granting preliminary injunctions against the Commissioners.

Appended to this report will be found a copy of the original and amended bill, filed by the Louisville & Nashville Railroad Company, which raised the main questions argued before the court, also the opinion of the court thereon, and the answer of the Commissioners to said bill. No further hearing of these causes has been had by the court, and the same are still pending to be heard upon their merits. Subsequently to the delivery of the opinion of the court, and the granting of injunctions in these cases, the following railroad companies filed bills against the Commissioners and applied for and obtained injunctions, to-wit : The Knoxville & Ohio Rail-

road Company, March 1st, 1884; the Memphis & Charleston Railroad Company, March 1st, 1884, in the United States Circuit Court at Nashville; the Chesapeake, Ohio & Southwestern Railroad Company, on the 5th of March, 1884; in the Chancery Court at Memphis; the Illinois Central Railroad Company, on the 20th of April, 1884, in the Chancery Court at Bolivar, Tennessee, thus making six companies that have instituted suits and obtained preliminary injunctions. The Commissioners have filed their answers to all of the bills in said suits except those of the Knoxville & Ohio, and the Memphis & Charleston Companies, which, by agreement of counsel, are to await the result in the case of the East Tennessee, Virginia & Georgia Railroad Company, which has control and management of said Knoxville & Ohio, and Memphis and Charleston roads. The Commissioners have been and are still taking proof in these causes. The granting of injunctions in these suits not only prevented the revision of the tariffs of the companies instituting them, but so greatly embarrassed the work of revising the tariffs of other and rival roads, that the Commissioners did not deem it advisable to formally proceed with this part of their work. Nevertheless, they have given attention to all matters of complaint subsequently made, and in some instances have had them adjusted by the roads. The bringing of said suits imposed on the Commissioners the further duty and labor of defending the same, and which, as before stated, they have been doing by filing answers and preparing proof. The Governor of the State employed counsel (Messrs. Vertrees and the Hon. S. F. Wilson) to assist the Commissioners in their defense, and which they have done with great energy, industry and ability.

COMPLAINTS.

Numerous complaints have been made to the Commissioners by shippers throughout the State of excessive charges, overcharges and unjust discriminations by the railroads, and also of the undue preference to through as against local rates. But the great majority of these complaints have been verbally made, and when the complainants have thereupon been informed by the Commissioners that the law required their complaints to be made in writing, they most invariably declined to reduce them to writing, saying in substance, that they cannot afford to incur the hostility of the roads.

Thus, the shippers of the State, in their uncertainty as to whether the Legislature will enact and the courts maintain laws that will protect them, stand in awe and dread of the power of railway managers, and suffer their rights to be trampled upon rather than hazard their dread disfavor—preferring “to bear the ills they have than fly to others they know not of.”

A few of the complaints made are specially referred to. It is shown that the rates charged for the transportation of flour from Franklin and Pulaski, Tennessee, and other points on this line of road are materially higher to markets south of them than the rates from Nashville on the same article to the same markets. For instance, the present rate on flour from Franklin or Pulaski to Montgomery and Wetumpka, Alabama, is fifty eight cents per barrel, while from Nashville (eighty miles north of Pulaski) the rate to the same markets is forty-three cents per barrel. This is believed to be an unjust discrimination. A similar complaint is made by the grain dealers of Shelbyville, and other places east of Nashville, of the discrimination made in favor of Nashville millers and grain dealers as against them, in the shipment of grain and flour to Southern markets. For instance, the rate from Shelbyville and Murfreesboro to Atlanta, Ga., on grain per 100 pounds is twenty-four cents, and on a barrel of flour forty-seven cents, while the rate from Nashville to Atlanta on the same is respectively twenty and forty cents. From the former places to Augusta, Ga., the rate on the same (100 pounds of grain and a barrel of flour), is twenty-nine and fifty-eight cents, while the rate on the same from Nashville to Augusta is twenty-two and forty-four cents. Similar differences in rates are also made in favor of Nashville on these articles to the markets of Macon, Savannah, Jacksonville, Florida, and Charleston, South Carolina.

In this connection it is here shown, that the rates from Nashville to Charleston, South Carolina, on 100 pounds of grain and a barrel of flour are respectively nineteen and thirty-eight cents, while the rates on the same from Nashville, to Charleston, Tennessee, a short distance east of Chattanooga, are twenty-four and forty-eight cents.

It is complained that the rate on dried fruit from Rogersville Junction, on the East Tennessee, Virginia & Georgia Railroad, to Knoxville, Tennessee, a distance of fifty-six miles, is twenty four cents per 100 pounds, while the charge on the same article from

Knoxville to Cincinnati, a distance of more than three hundred miles, is only twenty-five cents per 100 pounds, thus showing the difference in favor of through rates.

The merchants of McMinnville complain and show that on many articles of shipment they pay about three times as much from Nashville to McMinnville, a distance of 103 miles, as they do on the same articles from Louisville to Nashville, a distance of 185 miles.

The cotton shippers at Bolivar, Jackson, Milan, Bell's Depot, Brownsville, and various other places in West Tennessee, and Pulaski, in Middle Tennessee, complain of extortionate local rates on cotton.

The people of Dresden complain of excessive rates on coal.

Shippers at Gallatin and other places north of Nashville complain that they have to pay materially higher rates on many articles of shipment to Louisville than the Nashville shipper is required to pay on the same from Nashville to Louisville.

A shipper at Bradford, West Tennessee, complains and shows that he is required to pay \$4.05 freight charges on three and a half barrels of whiskey from Milan to Bradford, a distance of eleven miles, while on the same cargo from Cincinnati to Milan, a distance of nearly four hundred miles, he paid only \$3.60.

Complaints of the rates on live stock, grain, agricultural implements, coal, lumber, fruits and vegetables, have been made by shippers in various parts of the State.

The merchants of Paris complain that on certain classes of goods shipped from Louisville to Paris the charge is sixty cents per hundred pounds, while on the same class of goods shipped from Louisville for Murray, in Kentucky, by way of Paris, the charge is only thirty-five cents to the Paris depot, where the goods for Murray are put off. So that, goods for Murray are put off at the Paris depot and hauled in wagons twenty-five miles through the country and put down at Murray as cheap as the Paris merchant can have his goods put down at his depot. This, they say, is an unjust discrimination.

Such is the nature of some of the complaints made to the Commissioners, and by their recital here it is not intended to say or imply that the roads have no defenses to any of the same, but to show that such have been made, and that they call for investigation. We have not formally brought before us the parties to these com-

plaints, nor made any ruling thereon, for the reason that it was questionable under the law whether the Commissioners had the authority to make an official ruling on some of the matters complained of until they had first revised the tariffs of the roads as the law directed, and also for the further reason that they hoped to adjust these special complaints at the time when they would make a general revision of the tariffs of the roads so complained of, and at the same time thereby avoiding controversies between the roads and their patrons, to say nothing of the loss of time and expense to both parties by the separate hearing of these numerous matters. But such general revision of the tariffs was prevented and suspended as hereinbefore stated. Nevertheless, most of the matters complained of have been presented to the managers of the roads informally by the Commissioners, and some of them have been adjusted without difficulty or delay, but the majority have not. In this connection we deem it proper to state that on the application of the Commissioners, some of the roads have made concessions to the shippers, especially the Chesapeake, Ohio & Southwestern road, in granting a reduced local rate on cotton, lumber, coal, fruits and vegetables. This company also erected at the request of the Commissioners a suitable depot building at the town of Covington. At the request of the Commissioners, the Louisville & Nashville Company also granted a reduced rate on fruits and vegetables of the first and second classes, to markets north and west. The East Tennessee, Virginia & Georgia and the Nashville, Chattanooga & St. Louis roads have also made some concessions to shippers at the request of the Commissioners. The same reduced local rate on cotton, based on distance, that was requested and obtained of the Chesapeake, Ohio & Southwestern Company, was also requested of the Louisville & Nashville, the Memphis & Charleston, the Mobile & Ohio, and the Illinois Central roads, in West Tennessee, and the Nashville & Decatur Division of the Louisville & Nashville, in Middle Tennessee, but it was not granted by any of these roads.

Complaints of ordinary over charges, a few in writing, but the most verbally, have been made to the Commissioners. Those in writing have invariably been corrected when presented by the Commissioners to the officers of the roads. In these cases the complainants say that although the road admits the overcharge, so

much "red-tape" is required of them that indefinite and annoying delay is had before they are corrected, and that often they are not corrected at all.

There is a strong and popular complaint against the disproportion existing between through and local rates in favor of the former, it being alleged that in consequence of reduced profits on through rates, excessively high local rates are exacted. It is contended that justice and right require a more equitable proportion between the two. Touching this subject, Col. Albert Fink, a high railroad authority, says: "A railroad company can carry on competitive business for a long time at non-paying rates and not find it out, or else make the traffic for which there is no competition *pay for the losses* incurred in the competitive business." That is, "make up on local charges what they lose on through charges?" His answer, "Yes." (His testimony before United States Senate Committee on Labor and Education, 1883).

Many complaints are made, particularly at small stations, of poor depot accommodations and of the general neglect of the comfort and convenience of passengers, especially in cold weather.

But few complaints have been made of passenger rates, except against the Nashville, Chattanooga & St. Louis system, and these of the rule of that company that requires passengers to purchase tickets during business hours of the day, or else pay "conductors' rate," five cents per mile, the ticket rate of this company being the same as that of other leading roads in the State—namely, three cents per mile. The company claims that it is authorized by its charter to charge five cents per mile for the transportation of passengers, but that it makes a discount of two cents per mile to all who procure tickets during business hours of the day. As showing the position assumed by the company on this subject, the following letter, from its general passenger and ticket agent, is given. This was in reply to a passenger who complained that he went to the depot at Murfreesboro, at 9 o'clock P. M., just before the time of the arrival of the passenger train, to procure a ticket for Chattanooga; that he found the ticket office closed, and was compelled to pay the conductor five cents per mile to Chattanooga. He demanded of the company a return of the excess over the ticket rate, and in reply received the following communication:

GENERAL PASSENGER DEPARTMENT,
 NASHVILLE, CHATTANOOGA & ST. LOUIS RAILWAY, }
 NASHVILLE, TENN., Nov. 5, 1883. }

Mr. James A. Thomas, Special Agent of American Insurance Company, City :

DEAR SIR:—Your favor of the 3d instant, to Mr. Thomas, general manager, has been referred to me for reply. I have to state that the rule of which you complain has been in force on this line for several years, and you will find posted at all our ticket stations the notice that conductors are to collect five cents per mile for passengers paying on the train, this being our charter rate. For parties who purchase tickets during business hours of the day, we make a discount, but for those purchasing after business hours of the day, we charge the same as conductors' rates, and if the agent had been in the office at Murfreesboro, he would have charged you just what you had to pay the conductor. We cannot therefore refund anything in this case. Respectfully,

W. L. DANLEY, G. P. & T. A.

Touching the facilities which the railroads of the State are required by law to afford passengers for purchasing tickets, the following statute (Acts of 1855-6), is given, section 2359, Code of 1884:

"It shall be the duty of every person who shall sell, or be authorized to sell, tickets to passengers to travel on any railroad in this State, at any station or depot within this State, to open his office for sale of said tickets at least one hour before the time for the departure of each passenger train from each station or depot; and keep the same open during said space of one hour, and until the departure of each passenger train; and be always ready during said time to sell tickets to passengers as they may, during said hour, apply for them. Any failure to comply strictly with the provisions of this article shall subject the delinquent to indictment or presentment, and, upon conviction, to be fined not less than twenty nor more than fifty dollars."

It is proper to say that the Commissioners have not attempted to revise the general tariffs of the aforesaid company (N., C. & St. L.), as it declined to furnish such tariffs on the request of the Commissioners, and from the beginning, claimed through its then president, Gov. James D. Porter, that the Legislature could not inter-

ferre with the business of the company so long as it did not exceed the maximum charges named in its charter. The position assumed by this company in regard to the law will be found in Governor Porter's letter to the Commissioners, contained in the supplement to their first report, hereto prefixed. The Commissioners did not institute suit against this company to compel a compliance with the law, for the reason that they deemed it to the public interest first to proceed to revise the tariffs of the roads that had furnished their schedules, and when this was done to apply the law to the recusant company. But the revision of the tariffs of the other roads was also prevented, as hereinbefore stated. Let it here be understood that the Commissioners do not concede the claim made by the Chattanooga company, and subsequently made by the companies bringing suit, that the Legislature has no power to interfere with their rate of charges, so long as they are within the maximum named in the charter. But on the contrary, they maintain that the Legislature, through a Commission or otherwise, can revise and reduce such charges, though within said maximum, should they be found to be unjust or unreasonable. Most of the charters in the State are like that of the Nashville & Chattanooga Railroad. It is as follows:

"Provided, that the charge for transportation or conveyance shall not exceed thirty-five cents per hundred pounds on heavy articles, and ten cents per cubic foot on articles of measurement for every hundred miles, and five cents a mile for every passenger."

"The object (of this) was to fix a maximum charge, beyond which the companies could not go, and to leave the tariff of charges within that limit, to the companies, *subject to the rules of the common law, and the regulating power of the courts and the Legislature.*" (Cooper, J., *Rogan v. Aiken*, 9 Lea, Tenn. Rep.)

Thus, the Supreme Court of Tennessee has decided this question.

SPECIAL FAVORS.

It is believed, on information, that in many instances contracts or agreements are made, especially with merchants, grain dealers, coal dealers, manufacturers and other large shippers, whereby special rates, rebates, reshipping rates or favors in other forms are given that are not granted to the general public, and which are in

violation of law. To show how such favors operate to the prejudice of one shipper and the advantage of another, the following case, reported through the press during the preparation of this report, is given :

RAILROAD DISCRIMINATION PUNISHED.

"CLEVELAND, O., Dec. 13.—The jury in the freight discrimination case of Schofield & Teagle against the Lake Shore Railroad, returned a verdict this morning for \$5,000 for plaintiffs; \$4,000 for the difference in rate charged the firm and that charged the Standard Oil Company, and \$1,000 damages to punish the road for discrimination in rates. The claim of the parties to this suit was that they were unable to compete with the Standard Oil Company, because the latter was enabled, by a lower rate of shipment west by the Lake Shore road, to place its oil on the market at a lower figure than they were able to do."

As a rule, complaints come from small shippers, thus circumstantially confirming the general charge that large shippers can and do obtain of the roads rates that are not granted to the general public.

TARIFFS.

An examination of the freight tariffs of the various roads which have been furnished by them to this board as being now in force on said roads, shows that the maximum limit claimed in their charters is exceeded in their charges on many articles. The roads attempt to justify this by claiming that such freight is subject to shipment by measurement, although it is uniformly shipped by weight.

It will be seen also, by reference to said tariffs and the rules applicable to the same, that many articles are shipped at estimated weights, which are very much above their actual weight. For instance, yearling cattle are estimated to weigh 1,000 pounds; a hog for market, 350 pounds; an ordinary two-horse carriage, hack, spring or farm wagon, 3,000 pounds; a one-horse buggy, cart or spring wagon, without top, 1,500 pounds, with top, 2,000 pounds.

In leaving this branch of the subject, we deem it proper to say, that while the people complain of the roads, they have not been unreasonable or exacting in their demands. They do not ask that the roads shall serve them for less than a fair, reasonable and remun-

nerative compensation. But they do ask that they shall be charged only what is just and right—that all shall be treated alike—without discriminations as to persons or localities, and that there shall be no prejudicial disproportion between through and local rates.

DUTY OF THE COMMISSIONERS.

A moment's reflection will suggest to all persons of common intelligence that the Commission is charged with a most complicated and perplexing task, imposing a high responsibility and demanding an equal degree of intelligence, prudence and industry. Impressed from the beginning with the gravity and magnitude of the duties before it, the Commission moved slowly. By personal study and investigation, by utilizing the experiences of other Commissioners, by the information it expected from railroad experts and that derived from other available sources, the Commission hoped, within a reasonable time, to allay complaints, establish better relations between the people and the roads, and bring about just and reasonable rates for the charges of transportation. After seven months of preparation for this work, the Commissioners took steps to revise the tariffs of the roads, as provided by law, whereupon they were enjoined, and their duties in this regard suspended to the extent hereinbefore stated.

ANNUAL RETURNS OF THE ROADS.

The law requires that railroad companies or persons operating railroads in this State, shall make annual returns of their business to the Board of Commissioners on or before the 1st day of September of each year, made up to the close of the business on the 30th of June next preceeding, in the manner prescribed by the Commissioners upon blank forms, to be furnished by them to the companies. A call for these returns, with duplicate blank forms furnished by the Commissioners, was made of the following roads, of their business up to June 30, 1884, on the 9th of July, 1884, to wit:

Nashville, Chattanooga & St. Louis; Louisville & Nashville; Chesapeake, Ohio & Southwestern; East Tennessee, Virginia & Georgia; Mobile & Ohio; Cincinnati Southern; Illinois Central; Rogersville & Jefferson; Memphis & Charleston; Mississippi & Tennessee; Western & Atlantic; Tennessee, Coal Iron & Railroad Company; East Tennessee & Western North Carolina.

The following responded to said call (the others did not), and duly sent in their returns, of which brief abstracts are given below, to wit:

Chesapeake, Ohio & Southwestern; Mobile & Ohio; Cincinnati Southern; Illinois Central; Rogersville & Jefferson; Memphis & Charleston; Western Atlantic, and the Louisville & Nashville.

ABSTRACT OF RETURNS FOR THE YEAR ENDING JUNE 30, 1884.

CHESAPEAKE, OHIO & SOUTHWESTERN:

Total income.....	\$ 1,381,460 95
Total expenses (including taxes).....	1,097,726 67
Net income.....	283,734 28
Total earnings, per mile of road.....	3,468 07
Total expenses, per mile of road.....	2,673 23
Percentage of total expenses to gross earnings...	77 $\frac{89}{100}$
Capital stock.....	10,208,000 00
Funded debt.....	9,458,000 00

MOBILE & OHIO:

Total income.....	\$ 2,278,917 53
Total expenses (including taxes).....	1,547,467 47
Net income.....	731,450 06
Total earnings per mile of road.....	4,324 32
Total expenses per mile of road.....	2,935 62
Percentage of total expenses to gross earnings...	67 $\frac{89}{100}$
Capital stock.....	10,000,000 00
Funded debt.....	16,680,000 00

CINCINNATI SOUTHERN:

Total income.....	\$ 2,648,365 63
Total expenses (including taxes and lease of road)..	2,611,092 61
Net income.	37,273 02
Total earnings per mile of road.....	7,882 04
Total expenses per mile of road.....	5,354 44
Percentage of total expenses to gross earnings....	67 $\frac{93}{100}$
Capital stock.....	3,000,000 00

ILLINOIS CENTRAL:

Total income.....	\$ 4,340,786 95
Total expenses (including taxes)	2,424,392 16
Net income.....	1,916,394 79
Total earnings per mile of road.....	7,515 21
Total expenses per mile of road.....	4,197 37
Percentage of total expenses to gross earnings...	55 ¹ / ₁₀
Capital stock	10,000,000 00
Mortgage bonds.....	18,000,000 00

MEMPHIS & CHARLESTON:

Total income.....	\$ 1,394,019 80
Total expenses (including taxes).....	_____
Net income.....	_____
Total earnings per mile of road.....	4,224 30
Total expenses per mile of road.....	2,903 35
Percentage of total expenses to gross earnings...	68
Capital stock.....	5,312,725 00
Funded debt.....	4,528,000 00

WESTERN ATLANTIC:

Total income.....	\$ 1,277,396 00
Total expenses (including taxes).....	1,219,268 86 -
Net income.....	58,127 14
Total earnings per mile of road.....	9,262 34
Total expenses per mile of road.....	8,835 28
Percentage of total expenses to gross earnings...	95 ⁴ / ₁₀

LOUISVILLE & NASHVILLE:

Gross earnings (all lines).....	\$14,351,092 81
Operating expenses and taxes.....	9,133,234 94
Net earnings.....	5,217,857 87
Total earnings per mile of road.....	7,265 55
Total expenses per mile of road.....	4,272 46
Percentage of total expenses to gross earnings...	61 ⁴ / ₁₀
Capital stock.....	30,000,000 00
Mortgage debt.....	57,530,712 00

ROGERSVILLE & JEFFERSON :

The president and owner of this road—sixteen miles in length—reports the total earnings for the year ending June 30th to be \$19,582.34, and that the entire earnings of the road, except a support for the family of its owner, are applied to the operation and improvement of the road, and that as no itemized account is kept, he is unable to give details.

The blank forms furnished the companies on which to make their annual returns are not as complete as could be desired, and these Commissioners respectfully invite the attention of their successors to the blank forms used by the Massachusetts Commissioners, and which will be found in this office.

ACCIDENTS TO PERSONS REPORTED in ANNUAL RETURNS

	From causes beyond their own control.		From their own misconduct or carelessness.		TOTAL.	
	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.
CINCINNATI, OHIO AND SOUTHWESTERN.						
Passengers.....	.....	.....	.....	.....	.....	.....
Employees.....	1	4	2	19	3	23
Others.....	1	1	1	3	2	4
Total.....	2	5	3	22	5	27
MOBILE & OHIO.						
Passengers.....	.....	.....	.....	1	.....	1
Employees.....	1	1	.....	8	1	9
Others.....	.....	.....	1	.....	1	.....
Total.....	1	1	1	9	2	10
CINCINNATI SOUTHERN.						
Passengers.....	.....	.....	.....	3	.....	3
Employees.....	3	12	8	38	11	50
Others.....	.....	.....	12	11	12	11
Total.....	3	12	20	52	23	64
ILLINOIS CENTRAL.						
Passengers.....	.....	14	.....	.....	.....	14
Employees.....	2	8	.....	13	2	21
Others.....	1	3	2	1	3	4
Total.....	3	25	2	14	5	39
MEMPHIS & CHARLESTON.						
Passengers.....	.....	.....	.....	.....	.....	.....
Employees.....	.....	.....	.....	5	.....	5
Others.....	.....	.....	1	.....	1	.....
Total.....	.....	.....	1	5	1	5
LOUISVILLE & NASHVILLE.						
Passengers.....	.....	.....	2	3	2	3
Employees.....	1	19	7	42	8	61
Others.....	.....	.....	4	6	4	6
Total.....	1	19	13	51	14	70

Western & Atlantic reports accidents as follows: "One man by the name of Moore, and one by the name of Chapman, killed in Tennessee, by getting on the track in front of morning train. No cause known for their doing so. Frank Levy killed in Georgia, in attempting to board a passing freight train. S. J. Ward and M. A. Flowers killed in Georgia, at Tilton, by attempting to cross the track in front of a passenger train. They were under the influence of liquor. A man, name unknown, killed five miles from Atlanta by getting on track in front of freight train; supposed to have been intentional or deaf, as he paid no attention to signal from the engineer. One employe, M. A. Lyson, killed in Atlanta by coupling cars. Three bad washouts on night of April 14th, in Cobb county, Georgia, passenger train ran into one, causing death of mail agent — Merrill, and freight train ran into one, causing death of engineer McDonald and fireman — McCulloch.

PHYSICAL CONDITION OF THE ROADS.

The main stem of the Louisville & Nashville road, from Nashville to the Kentucky line, is in good condition; also the Nashville, Chattanooga & St. Louis road from Nashville to Chattanooga, and the Cincinnati Southern. Most of the other leading roads of the State are only in fair condition, not what they should be, but some of them have been and are being materially improved.

LENGTH AND VALUATION OF THE ROADS.

(Taken from the returns of the railroad Assessors July 17th, 1884.)

Total length of the several roads in the State...2094 miles.

Aggregate assessed valuation of same.....\$34,350,170 84

OFFICE EXPENDITURES.

The law provides that the office expenses of the Commission shall not exceed the sum of five hundred dollars per annum. The following exhibits show the expenses incurred by the Commission from April 25th, 1883, to January 1st, 1885, (twenty months):

For account of

Office furniture.....	\$ 69 37
Office rent.....	150 00
Office books, stamps, stationery and printing.....	146 60
Wages of porter.....	68 00
Four office signs.....	16 00
Railroad map for use of office.....	15 00
Coal	16 15
Gas Light Company.....	14 48
	<hr/>
	\$495 60

NEW RAILROAD BUILDING.

It has been said without proof or precedent that a Railroad Commission will prevent the building of new roads in Tennessee. Such has been the assumption in every State where this method of regulation has been adopted. And yet, no instance has been adduced from the history of Commissions in more than twenty States to sustain it. We know of no State that has taken a backward step on this subject, which it is more than probable they would have done, if their Commissions had prevented the railroad progress of the State. Where new railroads are wanted, and the business of the country will justify their building, they will be built, Commission or no Commission.

It is the opinion of all who have given the subject careful investigation, that Commissions do not prevent the building of new roads. On the contrary, the small stockholders, who are the chief and original source from which is derived the money to build new roads, who have so often been induced to part with their stock at a ruinous loss by the sharp practices of railroad speculators, are more inclined to invest their money where the policy of the State, through a Commission, is to secure, as far as possible, stability in rates, establish friendly relations between the roads and the people, and prevent ruinous impositions upon those seeking investments by requiring the roads to furnish the Commission with sworn annual reports of their financial condition, and which reports are open to the inspection of the public. In support of this view, and for the information of those who apprehend paralysis to new railroad building, we give a comparative statement, taken from Poor's Railroad

Manual, published in 1882 and 1883, showing the number of miles of railroad built in 1882, in seven States with Commission, and seven without :

WITH COMMISSIONS.		WITHOUT COMMISSIONS.	
Illinois	397 miles.	Indiana.....	253 miles.
Iowa.....	850 "	Colorado.....	497 "
Georgia.....	279 "	North Carolina.....	140 "
California.....	337 "	Florida.....	179 "
Kansas.....	547 "	Arkansas.....	491 "
Alabama.....	102 "	Louisiana.....	32 "
New York.....	759 "	Pennsylvania.....	102 "

The following extract from the report of the Georgia Commission for the year 1882, will be of interest on this subject :

" All predictions that the action of the Railroad Commission of Georgia would paralyze the railroad interest of the country have failed. An experience of three years of the practical operations of railroads in this State under the supervision of law has for that period showed largely increased revenues to the railroads, larger dividends to stockholders, higher prices for railroad shares, greater volume of business, largely stimulated trade, greatly increased tendency to invest capital in our State, more miles of railroads built, and being built, in Georgia, and corresponding benefits to the public generally, and the railroad authorities and the people on better terms with each other than ever before, during a similar period in our history."

The tabulated statement of the Railroad Commission of Michigan, for 1881, shows that their first official report was made in 1872, and that in 1871 there were in that State only 2,298 miles of railroads, and in 1881, there were 4,544 90-100 miles, so that the number of miles had about doubled in the ten years, and that, notwithstanding the panic from 1873 to 1877, railroad building had increased much more rapidly after the organization of the Commission than before. This report also shows on pages 27 and 28, that the cost of transportation from 1870 to 1881, had been reduced on the Michigan railroads more than one-half, nearly two-thirds.

The results in Massachusetts, Illinois, Missouri and other States are in the same line.

Upon this subject, the Georgia Commissioners, in their last report, dated October 15th, 1884, say :

“It has been assumed that the policy of the State, in establishing a Railroad Commission for the purpose of regulating railroad traffic within this State, has been detrimental to the interest of the railroads as well as injurious to the general welfare of the people ; and in its operations, has had a tendency to retard the building of railroads in the State. In response to this assumption, we desire to call your Excellency's attention to the following facts, showing the same to be without any foundation : 1st. The records of this office show that for the five years previous to the establishment of the Commission (in 1879,) there were built within this State less than one hundred miles of railroads, and that during the five years since the establishment of the Railroad Commission, more than six hundred miles of railroads have been constructed within the limits of the State.

Again, it is an undeniable fact that more of the stock of the railroads within the State of Georgia has been taken by foreign capital, and at higher rates, since the establishment of the Commission, than at any like period of time previous to its existence.

Not only has foreign capital flowed into the State, and been invested in the trunk lines which have been constructed since the establishment of the Commission and those in existence before its establishment ; but, from the records in this office, showing the number of miles of branch roads built and being built by the citizens of Georgia, it would seem that they have been stimulated to a degree in providing themselves with railroad facilities that has not been equalled in any five in the history of the State preceding the same.

These facts justify the conclusion that this policy of the State has neither lessened the confidence of her citizens in the continued value of railroads located within the limits of the State, nor deterred foreign capital from seeking investment in the same. Neither do the values, as shown by the market quotations of the stock of Georgia railroads, as compared with the quotations of stocks of railroads in other southern States, sustain the assertion that the

policy of the State, or the action of the Commission has tended to their depreciation.

The assurance of just and reasonable rates of transportation guaranteed to the citizens by the law has inspired their confidence, as is manifested in all sections of the State by an increased impetus given to all branches of manufactures and other industries.

Moreover, we think that it can be justly claimed that a fair and important review of the work of the Commission in carrying out the purposes of the law by a reduction and equalization of rates that were of force by the railroad companies at the time of its passage, will show a saving to the people of Georgia, annually, a sum equal to the full amount of their annual taxes, while the healthy financial condition of the railroads does not indicate that they have been injured thereby."

The Hon. George C. Pratt, in discussing the history of railroads in Missouri, in the "Kansas City Review of Science" for July, 1883, says :

" The extension of railroad facilities throughout the State is progressing more rapidly than at any former period, the number of miles having increased to 4,500 at the close of 1882. The total business of all the roads in the State has increased from upward of \$14,000,000 in 1877, to nearly \$28,000,000 in 1882. During the same time, the average receipts per mile of road have increased fully fifty per cent., and the receipts per train mile are far in excess of the cost of transportation. While this rapid growth of our railroad mileage has been going on, without any expense to us, and the enormous increase of railroad receipts, and these evidences of railroad profits have been developing, it also appears that under the operation of our law of rates, which went into effect in March, 1878, and through the labors of the Commissioners in enforcing that law, the rates we have paid since that date have been fully twenty-five per cent. less than they were before, or would have been since, but for the action of the Commissioners. This reduction has affected a clear saving to the people of the State, as shown by the late message of his excellency, Governor Crittenden, averaging \$5,000,000 a year, and amounting, for the five years during which this law has been in force, to \$25,000,000.

* * * * *

If it be good policy for our State to pay off its debts, and thus relieve us from the interest tax to which we are now subject, it is also good policy for counties, cities and towns to do the same; and the policy is a better one, when applied to business corporations, because, when their only liability is a stock account, of only one class, all the capital invested in them is represented and equally represented in the management; and good management might become the rule, instead of being the exception. To say that this policy will not some day be adopted by railroad companies, is to impugn the business sagacity of the owners of railroad property; and to doubt the possibility of holding these mammoth corporations within the restraints of statute law is to abandon all idea of government by law.

The very fact that human ingenuity has evoked from chaos this gigantic combination of forces, which is now causing the world of trade to tremble beneath its ponderous tread, is itself an assurance that human genius will also teach us how to cure this embodiment of concentrated power, and train it to work quietly in the service of commerce."

In those States where Commissions have been in operation, the reports show that railroad building is still in progress, the roads in a healthy condition, the people better satisfied, commerce and facilities for transportation increased; and that the Commissioners have been enabled not only to adjust many complaints and remove causes for litigation between the people and the roads, but also, acting as arbiters, to adjust differences between the corporations themselves.

The supreme object of the Tennessee Commission law is to prevent extortion and unjust discrimination, and if this is to prevent the building of new roads, then it must logically follow that the condition under which they are to be built, is, that they may extort and discriminate. Is it wise or prudent by reactionary legislation or otherwise to make this extraordinary and dangerous concession?

It is no longer a question as to whether this vast power shall be supervised and regulated by law. The real question is, how shall this be done wisely and well, so as to be just to the people and do no wrong to the roads?

It is suggested that the Commissioners should not be empowered to fix a tariff of rates absolutely binding on the roads without appeal to the courts. They should be given ample power and the

means to make a full inspection of the roads and their business, and to publish the same, that the citizen may know his rights, and the methods by which the roads are operated.

After careful investigation and revision, the Commissioners should provide such a tariff of charges as they consider reasonable and just to the public and the roads, and the enforcement of this should be left to the courts and juries, with liberty to the roads to prove *their* charges reasonable and just.

AS TO THE NECESSITY OF A COMMISSION.

A Commission is the only practicable method yet devised for the effective regulation of railroads. General statutes for this purpose have been virtual failures. And perhaps no better evidence of both the utility and necessity of Commissions can be given than the fact that they have been adopted in Europe, where railroads had their origin, and by more than half of the American States, while others are now considering the propriety of adopting the same method. When a railroad manager, so distinguished and influential as Col. Albert Fink, says that the "main principle in view in fixing rates is based upon what it is supposed the goods will stand," it seems needless further to discuss the necessity of providing such protection to the public as that contemplated by the Tennessee Commission Act of 1883.

RECOMMENDATIONS.

It is respectfully recommended that the Legislature amend the present Railroad Commission law so as to meet the objections found to it by Judge Baxter in his opinion delivered in the suits now pending, as far as it may be deemed advisable by that body to do so, after an examination and analysis of said opinion, which is hereto appended.

It is further recommended that the Commissioners, provided by said law, be empowered to examine the books and affairs of any railroad company or corporation, or person operating a railroad in the State, and to compel the production of books and papers, subpoena witnesses, administer oaths to them, and compel their attendance and examination. And in amending the present law, should it be deemed necessary, the Legislature is respectfully invited to

examine the Railroad Commission laws of Illinois, Massachusetts, New York, Alabama and Georgia, all of which, in the opinion of this board, contain some excellent provisions.

It is further recommended that the annual reports made to the Governor, as is now or may hereafter be provided by law, shall be printed at the expense of the State, in the manner provided by law for the printing of other public documents; that not less than one thousand copies be authorized to be printed and bound annually, under the direction of the Commissioners, and to be by them properly distributed throughout the State, and to the Commissioners and commercial bodies of other States when called for.

It is also recommended that the salaries of the Commissioners be increased from \$2,000 to \$3,000 per annum, and that they be authorized to employ a secretary at a salary not to exceed \$2,000 per annum, and that they be further authorized to employ experts, such as engineers, accountants, etc., for any special service when, in their judgment, the public interest requires it, at a cost not to exceed the sum of \$1,000 per annum.

On the subject of the increase of the Commissioners' salaries and the employment of a secretary, we would show that Alabama pays the president of her commission \$3,500 per annum, and his two associates \$3,000 each, and a secretary not to exceed \$1,500. Illinois pays her Commissioners \$3,500, and a secretary not to exceed \$1,500. Georgia pays \$2,500 to her Commissioners, and secretary, \$1,200; these Commissioners, in their last report, recommend that the salary of the secretary be increased to a sum not less than \$1,800. Missouri pays her Commissioners \$3,000 and secretary \$1,500. New York pays hers \$8,000 each per annum and secretary \$3,000, and authorizes the board to employ assistant secretaries, if necessary, at a cost not to exceed \$3,000 additional.

It is further recommended that the present law be so amended as to provide that at the next election of Commissioners one shall be elected for two years, one for four years and one for six years; and one to be elected every two years thereafter for the term of six years. This will always keep two experienced Commissioners in the office after the first election under this method.

THE LAW SUITS PENDING.

Inasmuch as the present Commissioners are to retire from office, it is suggested that the Legislature provide that their successors in office be substituted in their stead as defendants to the suits now pending (these suits being in effect suits against the State), and that the present Commissioners be held harmless as to any personal liability for court costs or other expenses growing out of said suits. And it is recommended that the Legislature pass a special act authorizing the Comptroller of the State to audit and pay all the court costs and other necessary expenses incurred by these suits in the event they shall finally be decided against the defendants. All of which is respectfully submitted.

JOHN H. SAVAGE,	} <i>Commissioners.</i>
J. A. TURLEY,	
G. W. GORDON.	

SUPPLEMENTAL REPORT.

SUGGESTIONS AND RECOMMENDATIONS.

RAILROAD WORK, RAILROAD POLICY AND RAILROAD LITIGATION IN TENNESSEE.

The 24th section of the act of 1883 requires "the Board, through their Chairman, to make an annual report to the Governor, * * * containing such facts as will disclose the actual workings of the railway system in this State, and such suggestions as to the general railroad policy of the State, as may seem to them appropriate. They shall also submit such recommendations for further legislation upon the subject of railroads as they may deem necessary or advisable for the interest of the State."

It appears that this section, in addition to a report in regard to routine business before the Commission, gives full power and makes it a duty to discuss the railroad problem, so far as practicable, in all its bearings upon the interest of the State.

Many volumes have been written, and many more will be written, on the railroad problem. It is desired to be as brief as possible, confining the report to general suggestions and recommendations. The railroad problem has been little discussed on behalf of the voters and tax payers of the State. The railroads, by a heavy expenditure of money for pamphlets, attorneys, supplements, and editorial comments almost innumerable, have presented their side of the question in a manner calculated to confuse the understanding of the people. To drive off these clouds, a few cardinal principles and self-evident propositions will be recited:

Men and generations pass away ; the doctrines of justice, equality and liberty are immortal, and remain unchanged forever ; and though sometimes defeated by traitors, falsehood, fraud, corruption, the power of money, or of arms, the battle is renewed from age to age by the true and the brave, who hold the thought of defeat in scorn, believing that He who rules the stars, smiles on those who fall for the rights and the liberty of men ; and that to the general welfare, sooner or later, victory will be given. American government, as understood and cherished by men whose instincts and understandings are truly democratic, means equal and exact justice to all men alike, without partiality or special favor to any.

It is written as self-evident, that "all men are created equal, and have an inalienable right to life, liberty, and the pursuit of happiness." Although the government of the United States may do many things, its grant of power is limited to the power "to promote the general welfare." Hence, every act intended to promote private interests, or confer special favor upon individuals, corporations, or classes, is unconstitutional and void, and would be so declared before intelligent judges.

The Constitution of Tennessee gives the people the "inalienable right to reform or abolish the government in such manner as they may think proper ;" hence, a proper judicial ruling would be that no government in Tennessee has ever had a right or power under the Constitution to confer a vested right in any privilege, or grant of power, as a special favor, on the ground that a creature can not be greater than the creator, and inasmuch as the people can abolish the government, a corporation created by the government is subject to the will of the people as absolutely as is the government itself. It follows from the foregoing premises that all corporations must be created for the public good, that is, to "promote the general welfare." If intended as special favors they are not within the grants of power to American governments and are void.

Corporations are privileges or grants of power in derogation of common right. Whatever exclusive privilege is granted to a company is taken from the rest of the people. This makes it unlawful for individuals to do what they had a right to do before the grant. It cuts off opportunity, and is in business a combination against which individual effort is almost as powerless as a single man against an army. Corporations are in substance royal preroga-

tives and protected monopolies. The charter grants a power to do a particular thing, which is protected by a prohibition against all other persons doing the same thing.

In England corporations began with the royal prerogative. The king created them. Charles the I. of England levied ship money by virtue of the royal prerogative, and found judges to maintain the power thus usurped and to condemn the patriotic Hampden, who resisted payment. But another grievous charge against that unwise and unfortunate monarch, was the fact that he granted charters to trading companies in consideration of large sums paid him, thus creating monopolies for the benefit of the few and to the injury of the people.

For these violations of the common rights of the people of England, King Charles and his prime minister, the Earl of Strafford, were beheaded.

It is difficult to say how this royal prerogative of the kings of England passed to the governments of America, inasmuch as it is nowhere expressly given in the Constitution, and there are strict limitations in regard to who shall be citizens. Corporations are not citizens of a State or of the United States. (See 1st Black's U. S. Reports, 286.)

Their existence has been recognized by the courts, and inasmuch as there are upwards of 30,000 corporations in the United States, they are expected to remain, whether possessing royal prerogative *de jure* or *de facto*. These elementary principles show that a strict construction is the proper rule in construing charters where powers are claimed by corporations. (See Sedgwick on Statutory Law, pages 338-339.)

It also follows that the government has no power to create corporations except to promote the general welfare, and that no corporation can legally exist whose operations are destructive of the public good. Such a corporation becomes a public nuisance, and may be abated, at the suit of the State, by indictment or by a proceeding for a forfeiture of its charter.

There are three kinds of corporations, which will be considered as distinguished from each other. They are all alike called corporations, and are all the creatures of statutory law; but they are unlike each other in many important particulars, and their rights and duties, and the laws that govern them, are widely different.

1st. Municipal corporations are such as cities, towns and villages, created for governmental purposes. These are mere tenants at will, and their charters can be amended or abolished by the Legislature at any moment.

2nd. Corporations strictly private, such as charters for private schools, churches, charities, manufacturing, agriculture, merchandise or other business of a private nature.

3rd. Corporations, public or quasi public, created by the public for the public, embracing duties that the State itself might well perform. To this class, banks, turnpikes, ferries, telegraph, express companies, and railroads belong. These last named corporations are in their essential particulars dissimilar to either of the first named. The popular error consists in applying to these latter corporations, decisions and principles applicable alone to the first.

Similitudes are found everywhere in the legal and natural world ; they are the cause of countless errors in law and in logic. Many things have something in common, but are unlike in all other particulars. To teach well is to distinguish well. Neither in law or in nature are similitudes identical or a reliable index to truth. The ox and the serpent have something in common. The man and the monkey resemble each other in many particulars, but good law for the one might be bad law for the other. A celebrated writer has said that the " rising sun " looked like a " lobster boiled." There is as much good sense in applying the same law and logic to the monkey and the man, to the " lobster boiled " and the " rising sun," as there is in applying the decision in the case of the Dartmouth charity school to a railroad, ferry, turnpike or banking corporation. This college case is good law for private schools, but no rule of conduct for railroads, banks, boats, mills or ferries.

The railroad is invested with a sovereign prerogative by the public for the use of the public. (See 4 Otto, U. S. R., pp. 128-130.) It was made with intent to promote the general welfare. Its every lawful movement must be along the line of the general good. To diverge from this line, is to forfeit its charter at the suit of the State. The railroad is an embodiment of two distinct and separate things, recognized and controlled by common law for more than 500 years.

1st. It is a common carrier.

2nd. It is a public highway.

At common law a common carrier was held to be a public servant—bound to carry for a reasonable reward, and liable to suits before the courts if he charged too much.

There is no statute in Tennessee which, expressly or by implication, repeals this rule of the common law.

The real and important contention between the roads and the State is made upon the words in their charters, which are as follows: "The company shall have the exclusive right of transportation or conveyance of persons, goods, merchandise and produce, over the said railroad by them to be constructed; provided, that the charge of transportation or conveyance shall not exceed thirty-five cents per hundred pounds on heavy articles, and ten cents per cubic foot on articles of measurement for every hundred miles, and five cents a mile for every passenger." The railroads contend that they have a right to charge the maximum mentioned in their charters. The State insists they never had a right to charge more than a reasonable sum for the services rendered; and that the provision or limitation in the charter is not a repeal of the common law, confining the charge to a reasonable sum. It was a simple precaution to guard the people against gross extortion and high-handed robbery, which the Legislature feared might be committed by these powerful corporations.

The power of the Legislature to regulate the charges of railroads within the maximum mentioned in the charters, has been affirmed by the Supreme Court of Tennessee, and the courts of all the States that have acted on the question. It is insisted that the power to regulate property, corporations and citizens is a sovereign power, inherent in every people, that can neither be sold, released or surrendered by a Legislature. (See 4 Otto, U. S. R., pp. 162, 164-179; 9 Otto, 719; 69 Illinois R., p. 80; 91 Ill. R., 256; 8 Lea, 121; 9 Lea, 617.)

Judge Baxter, in the railroad suits against the Tennessee Commission, pending in the Federal Court at Nashville, in his opinion recognizes the existence and necessity of the power to regulate railroads, in strong language, as follows:

"Everybody, from the very exigences of business, is compelled to patronize them. In this regard business men are left without any option. If unrestrained by wholesome legislation, the public would be very much at their mercy. They could, by unjust dis-

criminations made under the name of draw-backs, rebates or other disingenuous pretences, favor friends and oppress opponents, and so adjust and graduate their rates according to the exigencies of fluctuating markets, as to secure to themselves or those who operate them, an undue proportion of advancing prices. It would, therefore, in view of these obvious possibilities, be a humiliating confession to admit that there was no reserved power in the court or the Legislature to protect the public against such possible abuses. We do not hesitate to affirm the existence of such a power."

Judge Baxter, in his opinion, did not discuss the vital question in the suit aforesaid, to-wit, "the power of the Legislature to regulate the charges within the maximum mentioned in the charter," otherwise than as above shown, which opinion is plainly against the railroads on this point. The injunction granted is upon verbal omissions, and technical objections, all of which can be met and remedied by proper amendments. (See 6 Federal Reporter, p. 426.)

As to the power of the State to make a contract, see "The Home of the Friendless and Washington University v. Rouse, 8 Wallace, U. S. R., pp. 431-443. The dissenting opinion is the law in Tennessee. *Lynn v. Polk*, 8 Lea, 121. As to proof to show a contract, see Sedgwick on statutory law, pp. 340-341.

The Legislatures of twenty-four States have recognized this power, and the Commissions of twenty-two of these States are executing the laws.

In Tennessee and Mississippi the railroads resist the laws and defy the authority of the State. The Republican and Democratic parties of the nation are alike committed to the doctrine of regulating railroads. A majority of the State Commissions were created by Republican Legislatures. President Arthur is a railroad regulator; and Governor Cleveland signed the New York law which is one of the latest and best laws yet passed to regulate the roads.

Vanderbilt and Jay Gould and other railroad magnates obey the rulings of the New York Commission promptly.

HIGHWAYS AND PUBLIC ROADS.

All highways in England belonged to the King; in America they belong to the governments established by the people, and are regulated by law.

Railroads are a peculiar kind of highways, differing from all other highways.

The Constitution of Missouri declares all railroads to be public "highways and common carriers," but the railroad is not a highway like the sea, river, lake, canal, street or turnpike, nor are either of these like each other, nor are the modes of travel or the laws regulating travel thereon the same. A railroad corporation is the exclusive owner of a public highway, with the rights of a common carrier added thereto, and is unlike all other corporations in its powers and duties, and requires stringent laws to control a peculiar institution vested with great powers for the public welfare, which, if abused, can inflict great injury. (See the reports of the Missouri Commission for 1883 and 1884.)

It is the duty and business of the State to build public roads for the use of the people, and to regulate travel thereon. If the State delegates this high duty to a corporation, it cannot confer upon the corporation any power different from the power possessed by the State.

It is assumed, as a self-evident proposition, that if the State had built a railroad and was operating it and taking toll, that the State could not rightfully discriminate between persons or places, or charge unreasonable rates for the sake of increasing the profits; because it is the duty of all governments to do equal and exact justice to all citizens alike.

Neither competition or greater profits can justify discriminations, or greater charges for short hauls than are made for longer ones. Money taken from citizens under such pretext by the State or by railroads, is simply robbery on the highway, though done under the forms of law.

VESTED RIGHTS, PUBLIC PROPERTY AND PUBLIC JUSTICE.

"Salus populi suprema est lex." Railroads can exist only for the general welfare, and are bound to do equal and exact justice to all men alike.

In no sense can a railroad be called private property. It is as much public property as a public office.

Every man, woman and child in the State has an unalienable and vested right in every railroad in the State. This is a right to trans-

portation thereon for a reasonable compensation, and is such a right as can not be lost or forfeited in any manner known to the law, and can be enforced at all times by an appeal to the courts.

The question of a reasonable compensation is a question for legislators, courts and juries.

If the railroads could fix the compensation at will, it could fix it so high that it could destroy the rights of transportation.

The boasted and much talked of vested right of the railroad, is of a lower grade than the vested rights of the citizens. The road possesses a vested right to exclusive transportation over its road-bed, and is entitled to a just and reasonable compensation for services rendered and no more.

This right is held during good behavior, and may be lost by abuse of its powers or wrongs against the public. The railroads are here, and like our rivers, are expected to run on for ages. It is not true that Commissions or the advocates of regulation are the enemies of railroads. There is no desire anywhere to take from them wrongfully any vested right, nor can this be done if desired. No act of the Legislature can deprive the railroads of any vested rights. Such legislation would be void.

Railroad advocates insist that the charters exempt railroads from legislative control. They claim that the roads under their charters are a law unto themselves, and, like the Kings of England, can do no wrong. Between these two opinions, there is an irrepressible conflict. The interest and safety of the people are on one side, and the avarice and selfishness of the railroads on the other.

It is a fact well established by proof before courts and legislative committees, that railroads have lobbied Legislatures and tampered with public officers to secure legislation and official action in their special interest.

The people must make laws to control the railroads, or the roads will make the laws and rule the State.

Corporations created for a special purpose, have no power to engage in any other business; for example, railroads under a general charter can not lawfully engage in farming, merchandising, stock yards, banking, or own and publish newspapers; nor can they lawfully employ men, money, editors or newspapers to lobby Legislatures or interfere in popular elections.

Such acts are a violation of their charters, injurious to the public, and should be punished by indictment.

An act entitled "An act to protect the members of the General Assembly of Tennessee from importunity and annoyance by lobbyists and evil disposed persons not members thereof," is herewith submitted for the consideration of the General Assembly as follows:

SECTION 1. *Be it enacted by the General Assembly of the State of Tennessee,* That it shall be unlawful for any person not being a member of the General Assembly, for and in consideration of any fee or reward, or the hope or promise thereof, to address to the General Assembly, or to any member thereof, any word, speech (either oral, written or printed) in opposition to, or in the advocacy of, any law, resolution, proposition or policy then pending before said General Assembly, or in opposition to, or in advocacy of, any law, resolution, proposition or policy suggested for the action of said General Assembly.

SEC. 2. *Be it further enacted,* That any person guilty of either of the acts mentioned in the above section shall be held guilty of an attempt to unduly influence the action of the General Assembly in the enactment of laws, and upon conviction thereof shall be imprisoned in the penitentiary not less than one year nor more than ten years at the discretion of the jury trying the cause, and shall be disfranchised and not admitted to testify before the courts of justice in this State.

SEC. 3. *Be it further enacted,* That the purpose of this act is to prohibit all persons from all attempts to lobby or influence the judgment and action of the General Assembly in matters concerning the general welfare, by parties acting for pay and not from patriotism; and this law shall be construed as remedial so as to suppress the mischief; but shall not be construed in conflict with the right of petitions, or include any word, printing, or written address by a person who acts without fee or reward, or the promise or hope thereof, unless such person is in the employment and pay of the person or corporation in whose interest such word, printing or writing is uttered or published.

SEC. 4. *Be it further enacted,* That grand juries shall have power to summon witnesses and make presentments for offenses under this act, in like manner as under the statute for unlawful gaming.

The Legislature when assembled should carry out the will of their constituents, unmolested by lobbyists and agents paid to misrepresent and deceive.

The Democratic caucus of the last Legislature reported a bill to regulate the railroads. The roads conspired to defeat its passage. It is in proof in the suit of the Louisville & Nashville Railroad v. John H. Savage *et al.*, in the Federal Court at Nashville, by the oath of Ed Baxter, chief attorney of said road in Tennessee, that he, on behalf of said road, employed six attorneys for service in connection with the Railroad Commission bills then pending before the Legislature, to wit: Judge Henry C. McCorry, of Jackson; J. C. McDearmon, of Trenton; Lee Bullock, of Nashville; N. N. Cox, of Franklin; John W. Judd, of Springfield, and George Hughes, of Columbia. The first four named attorneys for this service were paid \$2,100 each. John W. Judd was paid \$1,000 and George Hughes \$500. Mr. Baxter also proved that he talked to members at the capitol and in the city, sometimes at their instance and sometimes at his own, and that he preferred the Edmondson bill to the caucus bill.

John W. Judd swore that he was the attorney of the Louisville & Nashville Railroad, and was at Nashville during the pendency of the commission bills before the Legislature; that he assisted F. R. Burrus, a member from Rutherford, in drafting a bill; that it was late at night when the bill was completed; that he had it copied and handed it to Mr. Burrus on the floor of the House the next day, which bill was introduced by Mr. Burrus. Judd also swears that he was before committees and visited some of the members at their rooms with his authorities, and that he was paid \$1,000 for his services.

Morgan W. Brown, an attorney at Nashville, swore that Jere Baxter, vice-president of the Memphis & Charleston Railroad, gave his check on Hale, Garten & Co., of New York, to James G. Aydelott, a merchant of Tullahoma, and to T. D. Gregory, a lawyer at Winchester, for \$500 each, for services rendered in connection with the Railroad Commission bill, then pending before the Legislature of Tennessee.

Jere Baxter, vice-president of the Memphis & Charleston Railroad, swore that he was present at the capitol during the session of

the last Legislature, and was opposed to all railroad legislation, and had men in his employ in this connection, and paid them, but who they were, and what they did, and how much he paid them, he refused to disclose.

F. R. Burrus, member from Rutherford, proves that John W. Judd, railroad lawyer, and Joe Lockhart, railroad employe, assisted him at his room in draughting what was known as the "Burrus bill," which bill was a substantial copy of the Edmondson bill, and was in substance the same as the Commission act of 1883, and that Judd had it copied and handed it to him (Mr. Burrus) on the floor of the house, when it was introduced.

Mr. Burrus also swore that both Judd and Lockhart assured him that if his bill passed that the roads would be satisfied, and no litigation would follow. This is the substance of all the proof so far taken on this point in said suit, but it is credibly reported that other roads paid in like manner large sums, amounting altogether to more than \$20,000.

It is undeniable, from all the proof considered in connection with the facts appearing on the journals of the Legislature, that the railroads dealt fraudulently and falsely with members of the Legislature, and that they deceived Edmondson and Burrus with delusive and false pretenses for the purpose of defeating the caucus bill, intending also to defeat the Edmondson bill, if possible, before the Legislature, or by injunction bills before the courts.

FACTS SUGGESTED THAT WILL "DISCLOSE SOME OF THE ACTUAL WORKING OF THE RAILROAD SYSTEM IN THIS STATE."

It is asserted, as the common law of the land for ages, that any act by a corporation, directly or indirectly done, outside of the business authorized by the charter, is a violation of the charter, and a usurpation of power not granted, and a crime against the State. (See Sedgwick on Statutory Law, pp. 339-341, 342.)

A few facts will be mentioned to show some of the "actual working of railroads" in this State.

It is a fact that cannot be denied that railroads, in connection with bondholders, have for years, by men, money and free tickets, interfered with nominating conventions and popular elections. They have also maintained a formidable lobby at Nashville to in-

fluence members of the General Assembly in the enactment of laws. It is suggested that an investigation by the present Legislature concerning the ways and means used by the railroad lobby in reference to legislation pending before the last Legislature, and also concerning money, men and means used in the recent canvass, would reveal corruptions and wrongs in Tennessee as odious and injurious to the public welfare as those revealed by Jay Gould on his oath, wherein he stated that the Erie road had spent millions to control legislation and official action.

Looking to the past, a man must be very dull who will not expect the railroads to be a factor in all political contests in the future, unless driven from the field by legal enactments.

It is to be expected that they will put forward their men, as Jay Gould says, "friendly men," for every office, and their attorneys, employes and newspapers will sing their praises. These men will be Democratic or Republican, high or low-tax men as circumstances suggest, but always the servants of these corporations, in or out of office. The utterances of some of their organs already presage this policy.

It is charged upon reasonable evidence that railroad magnates have conspired to place upon the highest judicial tribunal their especial favorites.

A power credited with attacks upon the judiciary of the United States, and that sends to Congress and Legislatures its friends, will not hesitate to use every means possible to fill judicial stations in Tennessee with men taught to construe the law in favor of corporate power. Such men may be honest and honorable and still dangerous to liberty and equal rights.

The difference between the friend of the people and the corporation lawyer is this: in all controversy between corporations and citizens, when the proper decision is doubtful, the man who has spent his life in hunting law and argument on the side of corporations, when acting as judge, will decide in favor of corporate power. On the other hand, in all such cases, the lawyer who has spent his time hunting up law and argument to protect the citizens, will give the citizen and equal right the benefit of every doubt.

It is repeated that all attempts by corporations to interfere in political contests or to control elections or appointments, is unlawful and a crime against the State.

PAY AND PATRIOTISM.

While the acts of patriots should be free and unrestrained, the purity of the ballot-box demands that the hireling should be punished and driven from the field. There is no difference in principle in controlling the ballot-box by money and controlling it by the bayonet.

If elections can be controlled with money they can with equal justice be controlled by armies. There is no difference practically between the work of Brownlow's militia and the effect of money used by corporations, as Jay Gould says, "to help friendly men."

If it was wrong in George III., of England, to hire Hessian soldiers to kill and subdue American freemen, it is no less wrong for corporate power to hire men to circulate false reports, mislead the voter and corrupt the ballot-box.

TO ILLUSTRATE THE HISTORY AND POWER OF RAILROADS A FEW FACTS ONLY CAN BE STATED.

The railroad is a stranger and a new comer among men. Fifty-five years ago there were neither railroads nor railroad laws. There is nothing in the world's history like the beginning and progress of railroad building, investment and power. Railroads have worked greater changes in the affairs of men in forty years than the bloody work of conquerors ever effected in many centuries. They now exist in all nations where wealth and intelligence are found. In Europe, all railroads are under the control of law, and many are owned and operated by the governments. The loud complaint of railroad employes that legislation, courts and juries, if allowed, will destroy them, is false, and is like the charge of the tyrant Pisistratus, who inflicted bloody wounds upon himself and charged his opponents with having done it, and the people therefore gave him a guard of soldiers, which he used to enslave them.

It is estimated that there are more miles of railway in the United States than in all the rest of the world. There are about 2,500 of these railroads. Poor's Railroad Manual estimates the total length of all railroads in the United States, in 1884, at 149,183 miles, and railroad building progressing at the rate of more than 6,000 miles per year, and at a cost of near \$500,000,000; so that before the end this year there will be enough railroad track to go around the

world six times and more. The total value of these roads is \$7,495,471,311, equal to about one-sixth of all the property and money of fifty millions of people. These roads tax the people annually for transportation \$823,772,924, and divide \$102,056,548 annually among themselves, after paying all expenses.

England has the carrying trade upon the ocean, and commands the money and markets of the world. Those who carry for the people of the United States will soon control the money, products and commerce of this continent. Americans were once formidable competitors with England for the carrying trade of nations. Now, our flag and mercantile marine have almost disappeared. Capitalists will not commit their money to the winds and waves of the ocean, when immense profits and vast fortunes like Gould's and Vanderbilt's are realized upon the land.

The United States has a Railroad Commissioner to supervise the railroads incorporated by Congress. The Commissioner, in his report for 1883, reports in reference to the legislation of the States as well as of Congress. He recommends national legislation for the regulation of commerce between the States and foreign countries, and State regulation for commerce within a State. He reports eighteen hundred thousand persons employed by these corporations in operating and building railroads. Of these (see pages 17, 145-54) "1,400,000 persons are employed in operating these roads, and probably 400,000 upon construction of new lines."

It is estimated that Congress has given favored corporations about two hundred millions of acres of the public lands. The report aforesaid (page 49) shows that the Northern Pacific (of which Jay Cooke and Henry Villard were builders) received 31,323,098¹⁰/₁₀₀ acres, which (exclusive of town lots) sells as high as \$30 per acre, and none lower than \$2.60, the average price being \$4.02 per acre; making \$122,918,858 given this one railroad, which sum is about fifteen millions more than one-half of all the taxable property assessed in Tennessee.

A few facts concerning the Louisville & Nashville Railroad will be given as a sample for the others operated in Tennessee. This road was chartered in 1850, and opened for business in 1859 between Louisville and Nashville. Its length was 185 miles. It now owns in fee simple, or by long lease, about equivalent to a purchase, 2,028 miles of railroads. It also owns a majority of stock

in the Nashville, Chattanooga & St. Louis Railroad, and in this way, and by lease, controls 1,205 additional miles of road, making together 3,233 miles of road owned, operated and controlled by this road June 30, 1882. It is probably more now. This road has many able attorneys in its employ in Kentucky, Tennessee, Alabama, Georgia, Florida, Mississippi and Louisiana—a list of whose names appeared recently in a Mobile paper. It probably pays for lawyers \$100,000 or more per annum.

It appears that a railroad of 185 miles, in about twenty-five years, has increased to 3,233 miles. The question may be asked what will be its possessions at the end of a century, and what other business can show anything like such profits. These facts are *prima facie* evidence of gross extortion.

The Nashville *American*, of August 7th, edited by a railroad director, contains the following statement:

“The railroad mileage of Tennessee for 1883 embraced a total track of 2,528 miles, nearly one-half of it steel rails, with a total capital investment of \$136,521,496, the lines and equipments having cost \$122,367,780. The freight moved over these lines last year was 4,088,788 tons, and the gross earnings from freight and passengers and all sources reached \$9,517,406, and net earnings of \$3,461,192. During the past year a fraction of over forty-seven miles was constructed, of which 21.40 miles were constructed from Sandy Hook to Lawrenceburg on the Florence & Nashville, and thirteen miles of the New Orleans, Louisville & Texas, from Memphis to the Mississippi State line. Within the past three years, from 1881 to 1883 inclusive, 269 miles of new road have been constructed in Tennessee.”

This statement purports to have been made from Poor's Manual, and is supposed to be accurate.

It is to be remarked that while this railroad director and editor fixes the estimated value of roads in Tennessee at more than 136,000,000, the railroad officials have filed bills against the State in the Federal Courts to resist the collection of taxes upon a valuation of a little more than \$30,000,000.

It is suggested that the net earnings of \$3,461,192 goes to pay dividends and interest on bonds, and almost the entire amount goes to New York, London and other points outside of Tennessee, and is a drain upon the money in circulation in the State.

It is estimated that the people of Tennessee pay railroads annually more than six dollars for each man, woman and child, and pay the State for taxes less than one dollar *per capita*. The railroad saves time and furnishes great facilities for commerce and travel, but collects from the people vast sums, transcending all collections in the past history of this country. The railroad is a grand thing—and so would be an emperor or king with a court ruled by discriminations and favorites to make some rich and honorable and others poor and dependent. Americans want neither king, court or corporation that is not under the control of law as absolutely as the humblest citizen.

**FACTS WORTHY TO BE NOTED BY THE PATRIOT, STATESMAN AND
READER OF HISTORY.**

1st. The 1,800,000 employees are almost absolutely under the control of railroad officials as if organized as an army.

2d. They are about six times more than Napoleon was able to command when he disposed of crowns and kingdoms, and made all Europe tremble.

3d. They are about forty times more than any army commanded by Alexander, Pompey or Cæsar.

4th. These corporations are said to be controlled and in great part owned by a few men—less than a dozen—headed by Vanderbilt, Gould, Huntingdon, and others like them.

5th. The annual investment of \$500,000,000 in railroad building exceeds investments in any other business, and shows that railroad building is the most profitable business in America. Capitalists are not fools and do not throw money away; they put it where it will do most good.

6th. The amount invested—the appropriation of hundreds of millions of the public domain, once the common property of all the people—the 400,000 men now engaged in building railroads, show that railroad building is progressing as rapidly as the general welfare demands.

7th. The merchants of Liverpool built the first railroad in 1830 from Liverpool to Manchester, which the Parliament of England had refused to build.

8th. Capitalists and business men will build railroads to all points where the trade and commerce of a people make them necessary, and not an exhaustive and expensive luxury.

9th. It is unwise and unjust to build railroads by the issuance of bonds, or by taxation levied upon the people, because in all instances of this kind the people pay for the roads, and speculators and railroad officials soon own them.

10th. It is estimated that \$700,000,000 worth of lumber is cut from American forests annually. The railroads get the lion's share of this sum. This process will leave but little valuable timber for the next generation.

11th. The railroad is called a civilizer. It is certainly a centralizer. It builds up centres at the expense of the circumference. Roman armies made the provinces tributary to the city. Railroads by rebates, discriminations, special rates, greater charges for short hauls than for longer ones, concentrate commerce, business, wealth and population at favored points.

These facts are not suggested in hostility to railroads, but that proper legislation may be enacted to prevent these wrongs by the roads, so far as practicable.

It is suggested that railroads built directly from Memphis to Nashville, and from Nashville to Knoxville or Bristol, would pay a better profit than any roads in Tennessee, but the building of such roads will be resisted by every means possible by the old roads, because they now have a monopoly, and they want no new roads. They can postpone the building for a time, but sooner or later such roads will be built, as well as others, to facilitate travel and commerce.

PRODUCTION AND TRANSPORTATION.

Production is the first consideration for a wise law-giver. Transportation is secondary. Without production there can be no transportation. The farmer heads the list of all producers, to which belong the manufacturer, lumberman, miner, fisherman and hunter, etc. The common carrier, merchant, and professional man are non-producers. If wisely managed they are aids to the producing classes, but always cost much money, and are frequently unjust and extortionate.

The railroads of the United States, as before shown, taxed the people for transportation for the year 1883, \$823,772,924. The people build the railroads and pay for running them; no matter who advances the money in the first instance, the public repays it with interest in the end. If officers ride in palace cars, receive immense salaries, build fine houses, live luxuriously, speculate and make immense fortunes, all these expenditures are not lost to the roads, they simply increase the cost of transportation, and are paid for by farmers, miners, manufacturers and other producers.

The roads produce nothing to eat or wear. They are sometimes credited with making governors, judges, members of Congress and other public officers.

LEGISLATION TO BE RECOMMENDED.

The Code of Tennessee will show that within the last forty years many laws have been passed for the accommodation and in the interest of railroads, during which time very little has been done by legislators to protect the people against wrongs inflicted by these powerful corporations.

It seems but reasonable that these corporations should not molest Legislatures until proper laws are enacted to protect the citizens. The present laws upon the statute book professing such a purpose are in most instances insufficient and little better than dead letters. They are never enforced, and are so drawn as to make it difficult for the best lawyers to tell what remedy, if any, can be enforced under them.

It is impracticable in the space allotted to this report to present bills, or to do more than indicate in a general way legislation recommended.

1st. It is recommended that the tenth section of the act of the 23d of November, 1865, be so amended as to make the offenses therein mentioned punishable by indictment or presentment, and that the grand jury have power to send for witnesses, as under the statute for unlawful gaming.

2d. That for all convictions under this statute and upon all presentments and indiotments against corporations, the attorney-general be allowed a tax fee against the defendants of \$100, and the prosecutor be allowed his attendance as a witness.

It is recommended (among other things) that the following be made high misdemeanors, and the grand juries be given power to send for witnesses :

1. Extortion.
2. Rebates—the giver and receiver indictable.
3. Discriminations against persons and localities.
4. Taking more for short hauls than for longer ones.

As now managed, a man at Gallatin pays much more on freight to and from Louisville than a man at Nashville pays to and from Louisville. In like manner citizens of Columbia and Franklin pay more from and to Birmingham and other points south than citizens of Nashville pay to and from the same points. Murfreesboro, Shelbyville, Springfield and other points are wronged in the same way. This is unlawful, as decided by the courts of Illinois and the law of Massachusetts. (See 105 Illinois Reports, 236).

If any man says that this appeal to criminal law will wrong the railroads, let him remember that overseers of roads, owners of turn-pikes, ferrymen, illicit distillers and liquor sellers, pistol carriers, rogues, *robbers on the highway*, cheats, breakers of the peace, and hundreds of other offenders, up to murder, are indictable by grand juries. Let him remember the many acts made criminal and severely punished to protect these roads. (See Code of Tennessee, sections 184, 4638, 4647, 4649, 4651a, 5336, and others.

If the roads do no wrong they are in no danger. Guilty men often escape. The innocent are seldom punished.

Extortion in fact and at common law mean nothing more or less than collecting more than the service is worth.

The value of service rendered is a matter of proof before the jury under charge of the court.

A man assaulted has a right to fight in his self-defense, but if he beats his adversary too severely, he is guilty himself. The common carrier is supposed to know what the service is reasonably worth better than the shipper. If he takes more than the service merits, he does it at the peril of prosecution.

The first section of an act of the Legislature of Illinois, approved April 7, 1871, is commended for a proper definition of the offense of extortion ; also, 2 Parson's Contracts, 172 ; 1 Bishop's Criminal Law, sec. 1020 ; Roscoe's Crim. Ev., page 805.

Rebates are nothing more nor less than a repayment or credit to the shipper of a part of the sum charged and collected for the service. The railroad must charge all persons the same price for the same amount of freight, for the same distance, or be guilty of unjust discrimination. (See 2 Parson's Contracts, 175; also 6 Federal Reporter, 426; 13 Federal Reporter, page 3).

The second and third sections of the Illinois law, before referred to, are also commended as proper for enactment in Tennessee.

To charge more for short hauls than for longer ones can neither be defended or excused. The law should inflict heavy penalties in Tennessee for this offense, as is done in Illinois and Massachusetts. (See 104 Illinois Reports, 476; 105 Illinois Reports, 236).

It is suggested that the Louisville & Nashville Railroad, in operating its lines within the State, violates its charter and the laws of the State in many particulars, by discriminations, special rates, rebates, overcharge, and collecting more for short hauls than for longer ones. It violates section ten of the act of 1865 by discriminating against Gallatin, Franklin, Columbia and other points. It also carries freight lower in one direction than another. It also charges more on some freight than is reasonable compensation for the service rendered.

It is further suggested that said Louisville & Nashville Railroad operates its road regardless of the third section of the act incorporating it in Tennessee, which provides:

"That the tariff of charges for the transportation of passengers and for goods, wares, merchandise and other articles and commodities, shall be equal on all parts of said railroad in proportion to distance, and that equal facilities for the transportation of the same in either direction shall be furnished."

DISCRIMINATIONS.

A few instances of unlawful discriminations among many reported will be given as a sample of railroad wrong inflicted upon commerce and business men in Tennessee:

Andrew Broadus, general assistant freight agent of the Louisville & Nashville Railroad, in giving his deposition in the aforesaid suit in the Federal Court at Nashville, stated that it was 159 miles from Louisville to Gallatin, and 185 to Nashville; that a hundred-pound cotton mattress transported from Louisville to Gallatin

would be charged \$1.10, but carried to Nashville, it would be charged only thirty-eight cents, thus charging the man at Gallatin about three times as much for 159 miles as the man at Nashville for 185 miles. He also stated that a hundred pounds of mattress transported from Louisville to Bowling Green (114 miles) would be charged \$1.10, but if carried by Bowling Green and on to Henderson, Ky. (262 miles), the charge would only be twenty cents. This is neither more nor less than gross extortion and discrimination in the nature of a military requisition upon the people along the main stem to enable this road to carry on a war of rates against the boats on the Ohio and Cumberland rivers. If the boats are destroyed, rates will be raised all along the line as high as the traffic will bear.

This same witness showed discriminations of like character in favor of Nashville and against Franklin, Columbia, Pulaski and intermediate points upon all shipments south of goods, produce, live stock, etc., and also upon shipments of cotton, coal, and other articles north, from Birmingham, Montgomery and other Southern markets, and also in like manner discriminations in favor of Nashville and against Springfield and other points between Nashville and Guthrie, on all shipments in the direction of or from St. Louis. He also showed special rates given to parties at Gallatin, Springfield, Nashville, Columbia, Pulaski, Memphis, Big Sandy, Brownsville, Paris, Humboldt and Franklin.

He also showed rebates or reshipping rates given to large dealers in grain at Nashville, by which grain shipped to Nashville can be carried South for much less freight than grain raised at Nashville.

This discriminates unjustly against the Tennessee farmer. It also gives the Nashville merchant an unjust and unconscientious advantage over the merchants and people in other counties. If Nashville merchants combine with railroads to maintain these unjust rates, they will have small claim on merchants and people in other parts of the State for patronage. Honorable men report that the Cincinnati Southern Railroad transports a car of coal 336 miles to Chattanooga for \$30, and that the East Tennessee, Virginia & Georgia Railroad hauls it in the same car to Cleveland (thirty miles), and charges \$42.

Citizens of Trenton report that the Chesapeake, Ohio & Southwestern Railroad hauls coal 180 miles to Reeves for less than \$1

per ton, and the Mobile & Ohio hauls it twenty-four miles to Trenton and charges \$1.40 per ton.

It is also reported that a piano bought in New York, intended for Shelbyville, will pass by Wartrace and be charged \$7 to Nashville and then \$5.50 to get it back to Shelbyville.

RAILROAD CHARTERS.

The laws providing for the granting of railroad charters need material amendments. Many charters are obtained to aid speculators, and with no intent to build the roads by the parties obtaining the charters. Some charters are obtained for the purpose of sale, and others to prevent the building of roads in opposition to speculative schemes.

Coal and timber lands may be so hedged in by charters as to render them of little value to others than these speculators in charters.

All parties now having charters, as well as those hereafter obtaining charters to build railroads, should be required to commence the substantial work of building within twelve months or forfeit such charters. They should be required to complete at least one-tenth of said roads every year or forfeit all rights under such charters. The removal of these charters will make room for men who desire to build roads.

STOCK WATERING.

It is suggested that railroads doing business in Tennessee should be prohibited from "watering" railroad stock or issuing stock dividends. This offense should be made highly penal, and be punished by a forfeiture of the charter of the road, and be made a felony on the part of any railroad official or stockholder aiding or abetting such transaction.

It is further suggested that the Louisville & Nashville Railroad Company owns and controls the majority of the stock of the Nashville, Chattanooga & St. Louis Railway, and that there is no law authorizing this to be done directly or indirectly, and that all such transactions should be prohibited by statute.

MANDATORY AND ADVISORY COMMISSIONS.

It is difficult to know precisely what is meant by the parties who use these terms. If a Mandatory Commission means that three

men shall be empowered to try all controversies between railroads and citizens, with power to compel obedience to decrees, without the right of appeal, that would be an unconstitutional, dangerous and unwise institution. In this sense, which is believed to be the common acceptance, there is not a Mandatory Commission in the United States.

No prudent man would desire to hold a position in such a tribunal.

Judging the future by the past, the railroads would make great efforts to capture this tribunal, and if they failed to do so, they would not fail to slander and traduce it. On the other hand, a mere Advisory Commission would be insufficient; it would do little good to have a set of men, no matter how skillful, to tell railroad officials that they are guilty of extortion, discrimination and violation of their charters, and the laws of the State, without any method provided by which these wrongs could be remedied.

The opinion of the Chairman, as to the powers of a Commission, appears in his printed address, as follows :

2. As Commissioner I want no power to coerce or force the roads to do anything. What the Commission needs is power and facilities to examine and inspect the condition and operations of the roads, and to make public their wrongs to the people, and to recommend to the Legislature proper remedies. The Legislature should pass laws providing easy and inexpensive methods, to enable the citizens to obtain their rights before the courts and juries without ruinous litigation, and to punish the roads and their officials for violations of law.

3. As Commissioner I do not want power to fix a tariff of rates absolutely binding on the roads without appeal to the courts. The Commission should be given ample power and the means to make a full inspection of the roads and their business, and to publish the same, that the citizen may know his rights, and the condition and methods by which the roads are operated.

4. After this careful inspection, the Commissioners should recommend to the roads such a tariff of charges as they consider *reasonable and just* to the public and the roads. The enforcement of this recommendation should be left to the courts and juries, with liberty to the roads to prove their charges reasonable, and the recommendations of the Commission erroneous.

5. The Supreme Court of Tennessee (9 Lea, 617) says: "If only a maximum of charge be fixed by charter, the reasonableness of other charges within the limit may be tested by the courts."

As hereinbefore shown, the Legislature may fix the rates, and the roads are bound by the rates so fixed; but inasmuch as tariffs may need frequent changes, it is better for the roads and public to have a rate of charges subject to inspection and recommendation by a Commission than a tariff fixed by the Legislature, unchangeable for two years.

6. As Commissioner I want no change of the common law from what it has been for centuries, so far as the rights of the citizens and the duties of the roads are concerned. What is now needed is wise laws, providing proper methods by which the citizen can maintain his rights, and have speedy remedies for his wrongs before the courts, without ruin and life-time law suits with these powerful corporations.

7. Railroad plank in the Democratic platform of 1884 is as follows:

"SEC. 4. That we favor the regulation of railroads by a Commission for that purpose, so as to protect the roads in all their rights and the people from extortion, and from unjust and unfair discrimination."

This expresses precisely my policy in regard to the railroads of Tennessee.

Commissioners so-called are, in law and in fact, inspectors also. The power of government to inspect has been recognized by all nations. Rome had her inspector called *Censor-Morum*. All armies have inspectors-general. Nations inspect imports, exports, passengers, vessels, cargoes, etc.

The Revised Statutes of the United States, as well as the Codes of the States, are full of inspection laws—steamboats, National banks, tobacco, coal oil, and many other things, too numerous to mention, are inspected.

Commissioners should stand as sentinels watching for the safety of the Republic—they should be charged to watch the operations and management of the railroads; to see that they neither charge unreasonable freight, or discriminate against persons or places; and also that the roads are operated in strict compliance with the laws of the State. They should be invested with ample power to

inspect the condition and operations of the railroads in every particular, and to publish the same at stated periods, for the benefit of the public; to prevent the watering of stock, and speculative frauds upon the public by railroad officials. They should be required to report to the Attorney-General, for his action, every violation of law by these corporations.

If the question was not complicated by the present laws, it would be suggested as the best policy to elect two Commissioners by the people from the State at large, and that the Governor be required to appoint the third from the political party casting the next highest vote to the dominant party.

This would lessen the danger of railroad combination with either party to defeat the other, and would be just to the minority, and probably result in more vigilant work for the general welfare. Republicans and Democrats are alike interested in preventing rebates, discriminations and extortions. Cities and towns are compelled to have watchmen and police on duty while the citizens sleep or attend to business. Every man cannot watch for himself, and no matter how good the watchmen are, lawless men will get in their work. Merchants, shippers and travelers cannot often know when they are wronged, and when it is known, a prudent man will loose a few hundred dollars rather than take the risk, delay and expense of a suit with a powerful corporation. The roads have a standing army of attorneys, and a suit against them generally lasts for years.

On this point the opinion of Judge Cooley, of Michigan, which is approved in the "Report of the Railroad Commission for Iowa for the year 1883," is given, as follows:

Judge Cooley says:

"The enormous wealth which this interest (the railroad interest) represents, the rapidity of its growth, the vast numbers, and the great ability it summons to its service, and its immense possibilities for evil as well as for good, cannot fail most powerfully to affect the imagination and to cause no little apprehension for the future, even in the most thoughtful and well-balanced minds. The fact, too, that the managers of great lines or systems of competing roads are found agreeing upon rates, and, perhaps, upon apportionment of business, and thus apparently putting an end to competition, has the appearance of organizing those who should be competitors

into one or more great monopolies with which the public are compelled to deal on their own terms; and these terms will *prima facie* be taken to be unreasonable and oppressive, for the reason that they are dictated exclusively by one of the parties concerned, irrespective of concurring will in the other. The railway interest being thus personified as a monopoly, all individual interests, as they come in conflict with it, seem to be placed at great disadvantage; none of them receives and disburses such vast sums of money; none of them has so many desirable places at its disposal; none of them, without loss to itself, can grant so many favors; none of them has so many means of affecting, duly or unduly, the legislation of the country. So *great* a power is certain to be more or less abused; and when it is wielded, as it sometimes will be, by men who are arrogant, over-bearing, and reckless of the rights of others, the public are more likely to regard the abuse as naturally and inevitably pertaining to a system than as exceptional. *Even the administration of justice cannot fail to be disturbed when it is observed that a large share of the best legal talent of the country is regularly employed by an interest whose other facilities give it great advantages in litigation with private parties."*

Railroad policy on this point is in the direct line of the English clergy in the days when corruption, luxury and avarice held high carnival in stations professing to teach the sublime truths revealed by the Savior in the sermon on the mount. This policy enabled the clergy in a short time to own most of the valuable property in the kingdom. Parliament passed many laws to remedy the evil. The clergy always found means to evade or defeat the laws until the passage of the Statutes of Mortmain.

Lord Coke said that the clergy, as a means for this accomplishment, always kept in their employ the most learned and best lawyers in the kingdom. (2 Blackstone, chap. 18, pp. 269-270).

In regard to the police power, or necessity for inspection of railroad officials of the State, Judge Cooley says:

"The first and most important duty of a railroad commissioner will be to stand as a friendly umpire between the public on the one hand and the railroad interest serving it on the other. He should for this purpose be given power to examine into all the details of railroad work, to investigate local complaints of unfair charges or discrimination, of unreasonable management of trains or of delays,

of obstruction of highways, and the innumerable annoyances and dangers of which the public has, or thinks it has, occasion to complain; to examine the condition of the road, the safety of bridges and other structures; whether proper regulation of police are established and enforced as a protection against calamities; and it should be his duty to bring to the attention of the railroad managers, in an authoritative way, any neglect, omission, or misconduct in which the public would be concerned. He should prepare himself to give authoritative and reliable information as a basis for public judgment on railroad affairs, and his impartial position and standing should be so unquestionable and notorious that his information will be accepted without any of the suspicion which is so likely to accompany that which is furnished by the railroad companies themselves. It cannot admit of doubt that a competent and suitable commissioner, occupying this position, could be of incalculable advantage, not only to the public, but to the railroad interest."

Again he says:

"The need for railroad supervision by some competent and impartial authority is emphasized by the peculiar division of powers between the nation and the States, which renders it impossible that the legislation of either the one or the other should establish a complete system for the regulation of the roads of any one State."

THE FREEDOM OF THE PRESS.

The freedom of the press should be held sacred. There can be no more useful citizen, or well deserving man, than a learned, able and patriotic editor—devoting his time and talents to promote the general welfare—content to receive such compensation and reap such reward as fair dealing and a strict regard for truth shall bring. Such a man will state the truth, the whole truth and nothing but the truth.

He will scorn to lie by inuendo or suppression; he will not profess to be of a party, that he may stab it and defeat it. He will not say one thing to-day and another to-morrow; he will not be all things to all men and nothing to any long. But such an editor, no matter how able or patriotic, will be at a disadvantage unless he is treated justly by railroad officials. His paper can be almost driven from railroad trains and public news-stands by a hint from

railroad officials. News-agents must travel and be accommodated. A hint from a railroad official will teach this agent how to sell the railroad papers, and how not to sell the others.

It is reported that such things have occurred during the present year.

Again, the weekly press, as a rule, use "patent outsides." These papers are transported weekly by the roads. Unless regulated, the roads can transport free, or upon nominal charges, the papers that favor railroad policies, and make it up by heavy charges against editors they consider inimical to railroad policies.

These circumstances make it dangerous for an editor to express with freedom his opinions, if in conflict with the views of railroad officials.

On this point an extract from the argument of Judge Jere S. Black, of Pennsylvania, is given, as follows :

"We are often told that in this struggle for honest government against the power of the railroad corporations the just cause has no chance of success. We do seem to be out on a forlorn hope. The little finger of monopoly is greater than the loins of the law.

The influence of our enemies over the Legislature is mysterious, incalculable and strong enough to make the Constitution a dead letter in spite of oaths to obey it, and a popular demand, almost universal, to enforce it. There is no other subject upon which the press is so shy as upon this, the most important of all. Afraid to oppose the corrupt corporations, and ashamed to defend them, it sinks into silent neutrality. Prudent politicians always want a smooth road to run on, and the right path here is full of impediments. In this state of things we seem to be weaker than we really are; for the unbroken heart of the people is on the side of justice, equality and truth. Monopolists may sneer at our blundering leadership and the unorganized condition of our common file, but they had better bethink them that when the worst comes to the worst our raw militia is numerous enough to overwhelm their regulars, well paid and well drilled as they are. They have destroyed the business of hundreds for one that they have favored. For every millionaire they have made ten thousand paupers, and the injured parties lack no gall to make oppression bitter."

A few papers in Tennessee have a monopoly of the Associated Press dispatches, and as the law now stands, the railroad officials

have it in their power not only to make the "press shy," but to make it very inconvenient and expensive to any editor who dares criticise adversely railroad men and policy. This gives the railroads of America a control over our *free press* about as efficient as the penal laws of the kingdoms and empires of Europe, where editors are prosecuted, fined and imprisoned for publishing things unpleasant to royal ears. All papers are entitled to equal facilities for transportation and circulation, without favor or partiality to any. To secure this the proper legislation should be enacted.

FREE PASSES.

It is suggested that the State has the power to compel the roads to transport her Commissioners or inspectors in discharge of their duty free of charge. The policy of so doing is another question. Many of the States require the roads to perform this service.

The New York statute will not allow the railroads to issue free passes to her Commissioners, but requires the Secretary of State to issue free passes to the Commissioners and their employes, to travel free over the roads of the State. If free passes are issued to State officials they should be signed by some State official, and not by the railroad officials. If signed by a State official the simple question of the power of the State to do so is presented for decision by the courts. There was no free passes to Commissioners in the caucus bill before the last Legislature. It appears in the law of 1883. This doubtless met the approval of the railroads and their attorneys.

Archimedes, the Greek mathematician, said, with a proper fulcrum upon which to rest his lever he could move a world. In the hands of railroad magnates, the free pass, resting upon a money consideration as a fulcrum, has proved itself a most potent lever to control and move the acts and minds of public bodies and public men in every station.

Although the act of 1883 directed the roads to give free passes to the Commissioners, there was an incessant storm of ridicule and abuse from the beginning, hurled against them for accepting the passes, and afterwards trying to regulate the railroads. It seemed to be the opinion of editors of railroad newspapers and of railroad employes, that the free pass should operate as a purchase of the Commission for a valuable consideration. All public officials should not only be innocent, but above suspicion. When some ride free

others must pay more. The running expenses, interest, salaries and dividends must be paid. It is not just to the small officials for the roads to give free passes to the Governor, Secretaries, Congressmen, legislators and judges, and afterwards to charge magistrates, clerks, sheriffs and other small officials.

If a rich man, with many suits in court and more expected, should tender his Honor his carriage and horses to carry him around the circuit, that would resemble an attempt to influence judicial action.

It will be difficult to convince the public that railroad officials, in granting free passes to State officials, do not intend thereby to influence official action. These passes begin and die with the term of office; like rebates and special rates, they discriminate against the public, and are not equal and exact justice to all men alike.

PERSONAL EXPLANATION.

By parliamentary law a personal explanation is always in order. The Chairman, to correct errors in reference to himself, will submit a statement. In the recent canvass railroad orators and newspapers christened the railroad regulation policy announced in the Democratic platforms, as the "Savage policy;" also, in like manner, then and now, the Chairman is heralded by their agents as the author and champion of this "policy," when in fact and in truth, prior to his appointment as Commissioner, he had never, in any public speech or by any printed document, discussed or advocated this policy in any manner whatever. He had no agency whatever in passing the law of 1883. He refused to talk to members of the Legislature about it while pending, believing it wrong to do so.

With this explanation, he is willing hereafter to be styled "the advocate and champion" of a policy to regulate inter-State commerce by national legislation, and commerce within a State by State legislation.

The office of Railroad Commissioner brings to its possessor much labor, little pay, and great abuse. It was offered by the Governor, and was accepted because it seemed to be the wish of friends, and it was hoped that some good might be done. It was considered a task and burden rather than a personal benefit.

The following extract from the Chairman's printed address will explain his relation to this policy :

"It is recommended that the act of 1883 be amended reserving the rights of the State in these suits, and that other provisions, free from the supposed defects imputed by the Federal Judges, and in conformity with the wise legislation of other States, be enacted, and that the Commission be reorganized on a new basis.

"There is one Commissioner unwilling to hold the office under the present law, without material amendment, and in no event desires to hold it longer than the railroads are forced to obey the law."

Office-holding with the Chairman has been a losing business. His profession and private business have always yielded more net profit than any office he has ever held. For him private life has no regrets and official station no charms. To know that anything done by him had in some degree promoted the general welfare, or had bettered the condition of some poor widow or orphan child, would bring more contentment than all the riches corporate power could bestow.

He has toiled for what he considered the best interest of the people of Tennessee, and desires their good will and confidence more than any office that could be given. Riches and selfish labor perish with the individual—good deeds for fellow-citizens live after we are in the grave. He has tried to do the State some service, and hopes he may have aided in fixing in the popular mind a few thoughts, based upon the highlands of truth and reason, that may stand in the political storms of the future as beacon lights upon the sea-shore, to guide the weary wanderer to the ports of safety when the waves run high and dark clouds are low.

He has no apology to make, or pardon to ask from ambitious, time-serving politicians, from bondholders, or greedy monopolies. He regrets nothing that he has done to protect the people against their wrongs. He only regrets that he could not do more.

He cares little for the unmerited abuse heaped upon him, knowing that good men regret errors, but rarely abuse bad men, while it is a universal rule with bad men to slander, ridicule and rail at men better than themselves.

JOHN H. SAVAGE,

Chairman Railroad Commission, State of Tennessee.

APPENDIX.

APPENDIX.

LOUISVILLE & NASHVILLE RAILROAD COMPANY

vs.

JOHN H. SAVAGE, JOHN A. TURLEY AND GEORGE W. GORDON,
"THE RAILROAD COMMISSION OF THE
STATE OF TENNESSEE."

ORIGINAL BILL.

To the Honorable Judges of the Circuit Court of the United States for the Middle District of Tennessee, Sitting in Equity:

The Louisville & Nashville Railroad Company, citizens of the State of Kentucky, incorporated by that name by that State, and having their principal place of business at Louisville, in said State, complainants bring this bill against John H. Savage, John A. Turley and George W. Gordon, "The Railroad Commission of the State of Tennessee," all citizens of said State, defendants.

Complainants respectfully show unto your Honors as follows:

By an act of the General Assembly of the Commonwealth of Kentucky, approved March 5, 1850, certain individuals were appointed commissioners to receive subscriptions to the capital stock of the Louisville & Nashville Railroad Company, and the subscribers of said stock, their successors and assigns were thereby declared to be incorporated into a company by the name of the Louisville & Nashville Railroad Company, and by that name were capable of having perpetual succession, of suing and being sued, and of exercising all the rights and privileges which other corporate bodies may lawfully exercise. They were also vested with all the powers and rights necessary to the construction of a railroad from the city of Louisville to the Tennessee line in the direction of Nashville.

The eighteenth section of the charter contains the following provisions:

"That the president and directors shall have power to purchase, with the funds of said company, and place on any railroads constructed by them, under this act, all machines, wagons, vehicles or carriages of any kind, which they may deem proper, for the purposes of transportation on said road; and that they shall have power to charge for tolls and the transportation of persons, merchandise and prop-

erty of any kind whatever, transported along said railway, any sum not exceeding the following rates, to-wit: On all goods, merchandise or property, for every one hundred pounds transported over twenty miles and under fifty miles, three and a half mills for each mile; and for persons and every species of live stock and every other description of freight and property, they shall charge no greater rate than is authorized to be charged on the railway from Lexington to Frankfort; that it shall not be lawful for any other company, or any other person or persons to travel upon or use any of the roads of said company, or to transport persons or property thereon, without the license and permission of the president and directors thereof, and that the said road or roads, with all their works, improvements or profits, and all the carriages, vehicles and machinery for transportation used therein, and all other species of property thereunto belonging are hereby vested in said company incorporated by this act and their successors forever."

The nineteenth section of the charter is as follows:

"That the said president and directors shall, annually or semi-annually, declare and make such dividends as they may deem proper, if the net profits arising from the resources of said company, after deducting the necessary current and probable contingent expenses, and that they shall divide the same among the stockholders of said company in proportion to their respective shares."

The twenty-first section of said charter is as follows:

"That so soon as the company shall have completed five miles of their route, they may commence and prosecute their business upon the terms and upon the stipulations herein provided as though the whole work was completed."

The toll and rates authorized to be charged on the railway from Lexington to Frankfort "for persons and every species of live stock and every other description of freight and property," were fixed by the charter of the Lexington and Frankfort Railroad Company granted by the General Assembly of the Commonwealth of Kentucky, by an act approved February 29, 1848.

The twentieth section of said last mentioned charter provides that the Board of Directors

"Shall have power to charge for tolls and the transportation of persons, goods, produce, merchandise and property of every kind whatever transported by them along said railroad between Lexington and the Kentucky river, any sum not exceeding the following rates, to-wit: for transporting any distance single packages weighing not less than 100 pounds, twenty-five cents; and at that rate if such packages weigh more than 100 pounds: for transporting goods, produce, merchandise, or property of any kind, not less than three and a half mills nor more than four mills per 100 pounds weight per mile; for transporting passengers not less than three and a half cents per mile nor more than four cents per mile for each passenger, with his baggage not weighing more than forty pounds; except upon the article of coal, upon which there shall be charged not less than three cents on the bushel; but the charge on coal shall at no time be fixed at a rate which will not yield a profit on its transportation. Live stock, poultry and furniture, also feathers, wool, rags, and other light bulky articles, weighing not more than sixty-five pounds to the cubic foot; also silver and gold, bullion, money of all descriptions, and mails, are excepted from the rates herein established; and the Board of Directors or their

agents, shall be and they are hereby authorized to contract specially for their transportation, upon such terms as the parties interested may agree upon; provided that such rates shall in no case exceed fifteen per cent. over the rates allowed to be charged for heavy merchandise or produce, except for gold, silver, bullion, money of all kinds and mails."

This charter of the Lexington and Frankfort Railroad Company was amended by an act of the Legislature of Kentucky, approved February 28, 1849, which abolished the minimum rates established by the twentieth section of the charter, except upon the article of coal, and authorized the Board of Directors "to charge for tolls and the transportation of persons, goods, produce and merchandise, and property of every kind (except coal) any sum they may deem proper, not exceeding the maximum rates prescribed by said twentieth section."

The above quoted provisions from the charter of the Lexington and Frankfort Railroad Company were in full force and effect when the Louisville & Nashville Railroad Company were incorporated on March 5, 1850.

By an act of said General Assembly, approved March 20, 1851, said company were given the same power to construct any branch road they might desire, that the charter gave them to construct the main line. Various other powers, rights and duties were conferred and imposed by said acts upon said company not necessary to be herein mentioned, but which will be seen from the acts themselves, which will be produced when required.

On the 4th day of December, 1851, the General Assembly of the State of Tennessee passed an act, the first section of which reads as follows:

"Be it enacted by the General Assembly of the State of Tennessee, That the right of way for the construction of a railroad from the line between the States of Kentucky and Tennessee, so as to connect the cities of Louisville and Nashville by railroad communication, be and hereby is granted to the Louisville & Nashville Railroad Company, incorporated by the Legislature of Kentucky, with all the rights, powers and privileges, and subject to all the restrictions and liabilities set forth and prescribed in a charter granted to said company by the Legislature of Kentucky and approved March 5, 1850, and the amendments thereto passed by said Legislature, and approved March 20, 1851, for the term of nine hundred and ninety years, except as further provided in this act."

The third section of said last mentioned act is as follows:

"That so soon as said company shall have completed five miles of said road from Nashville, they shall commence and prosecute their business as provided in the twenty-first section of said charter; that the tariff of charges for the transportation of passengers and for goods, wares, merchandise and other articles and commodities shall be equal in all parts of said railroad in proportion to distance, and that equal facilities for the transportation of the same in either direction shall be furnished."

The tolls and rates charged by complainants for the transportation of persons, goods, produce, merchandise, live stock and property of every kind over said railroad, are now and have been for many years far below the maximum rates established by their charter. Their tariff of charges for the transportation of passengers, and for goods, wares, merchandise and other articles and commodities, are and have been for many years past, equal on all parts of said railroad in proportion to distance, and equal facilities for the transportation of the same in either direction,

are, and for many years past have been furnished by complainants. Relying upon the terms and stipulations contained in their charter in regard to tolls and rates, complainants invested many millions of dollars in the construction and equipment of their road, which extends from Louisville in the State of Kentucky, to Nashville in the State of Tennessee. They have necessarily contracted an indebtedness amounting to many millions, secured by mortgage upon their road, property and franchises, and they have no means of paying said indebtedness, nor of meeting the necessary expenses of operating and maintaining their road, except the revenue derived from the tolls and the rates which they were authorized to charge by their charter.

The act of Tennessee passed December 4, 1851, referred to above, is in its title styled, "An act to incorporate the Louisville & Nashville Railroad Company," but upon an inspection of it the court will see that it has no such legal effect. Its only effect was to permit the corporation created by the Legislature of Kentucky to exercise its functions in the State of Tennessee, subject to certain qualifications and restrictions imposed by the Legislature of Tennessee; it was not intended by said Legislature to create a new and distinct corporation of the same name in Tennessee, nor was it intended to make the Kentucky corporation a corporation of Tennessee.

The Louisville & Nashville Railroad Company were duly organized at Louisville, Kentucky, under the before recited acts of that State; the stockholders of said company hold their meetings in the State of Kentucky, and not elsewhere. Most of the chief officers of said company are located at Louisville, in said State, and none of them are located in Tennessee. All of the subordinate agents of said company make their reports directly or indirectly to the main office of said company at Louisville aforesaid, where the results of the company's business are consolidated, the earnings of their railways concentrated, and the payment of their indebtedness audited and provided for. At Louisville aforesaid are erected their principal machine shops for the construction and repair of their rolling stock and engines, and at that place said rolling stock and engines are kept when not in actual use upon the road. The Louisville & Nashville Railroad Company therefore aver that they are citizens of the State of Kentucky, incorporated by that name by said State, and have their principal place of business in said State.

II.

On December 11, 1845, the General Assembly of the State of Tennessee passed an act to incorporate the Nashville & Chattanooga Railroad Company. (See Acts of Tennessee, 1845-6, p. 17.)

The first section of said charter is as follows:

"Be it enacted by the General Assembly of the State of Tennessee, That for the purpose of establishing a communication by railroad between Nashville and Chattanooga the formation of a company is hereby authorized, which when formed shall be a body corporate by the name and style of 'The Nashville & Chattanooga Railroad Company,' and by said corporate name shall be capable in law to buy, receive by gift, hold, sell and convey real and personal estate as hereinafter provided, make contracts, sue and be sued, to make by-laws, and to do all lawful acts properly incident to a corporation and necessary and proper to the transaction of the

business for which it is incorporated, and to have and use a common seal and the same to alter and destroy at its pleasure, and shall have perpetual succession of members."

Section eight of said charter is as follows:

"The affairs of said company shall be managed by a board of directors, to consist of fifteen, who shall be chosen by the stockholders from their own body, and a president of the company shall be elected by the directors from among their own members in such manner as the regulations of the corporation shall prescribe."

The ninth section of said charter contains the following provision:

"As soon as the number of forty thousand shares shall have been subscribed, it shall be the duty of the commissioners appointed to declare the same to appoint a time for the stockholders to meet in Nashville and give notice thereof by publication in some of the newspapers of Nashville, at which time and place, the said stockholders, in person or by proxy, shall proceed to elect the directors of the company, and to enact all such regulations, rules and by-laws as may be necessary for the government of the corporation and the transaction of its business."

The fourteenth section of said charter is as follows:

"The said company shall have the exclusive right of transportation or conveyance of persons, goods, merchandise and produce over the said railroad by them to be constructed: *Provided*, that the charge of transportation or conveyance shall not exceed thirty five cents per hundred pounds on heavy articles and ten cents per cubic foot on articles of measurement for every hundred miles, and five cents a mile for every passenger; and *provided also*, that the said company may when they see fit farm out their rights of transportation on said road subject to the rates above mentioned."

The thirteenth section of said charter is as follows:

"The profits of the company, or so much thereof as the board of directors may deem advisable, shall, when the affairs of the company will permit, be semi-annually divided among the stockholders in proportion to the stock each may hold."

The thirty-third and thirty-fourth sections of said charter are as follows:

"The said company shall possess such additional powers as may be convenient for the due and successful execution of the powers granted in this charter and for the successful construction and management of the work."

"This charter shall be amendable from time to time by the Legislature whenever the president and directors shall unanimously petition for amendments, specifying in the petition the nature of such amendments; and when such amendments shall be adopted by the Legislature and submitted to the directory, and be accepted and adopted unanimously by the president and directors, they shall be obligatory on the stockholders, and not otherwise."

On February 2, 1846, said General Assembly passed an act to incorporate the Memphis & Charleston Railroad Company (see Acts 1845-6).

The first section of said charter is as follows:

"*Be it enacted by the General Assembly of the State of Tennessee*, That, for the purpose of establishing a communication by railroad between Memphis, Tennessee, and Charleston, South Carolina, the formation of a company is hereby authorized, which, when formed, shall be a body corporate by the name and style of 'the Mem-

phis & Charleston Railroad Company,' and by said corporate name shall be capable in law to buy, receive by gift, hold, sell and convey real and personal estate as hereinafter provided; make contracts, sue and be sued, to make by-laws, and to do all lawful acts properly incident to a corporation and necessary and proper to the transaction of the business for which it is incorporated; and to have and use a common seal and the same to alter and destroy at pleasure, and shall have perpetual succession of members."

Sections eight, nine, fourteen, thirty, thirty-three and thirty-four of the charter of the Memphis & Charleston Railroad Company are identical in language with the corresponding sections quoted above from the charter of the Nashville & Chattanooga Railroad Company.

III.

On February 4, 1852, said General Assembly incorporated the Nashville & Memphis Railroad Company (see Acts of 1851-2, p. 299).

Section one of the charter of this company provides that they shall "have perpetual succession, and by said corporate name shall sue and be sued and have all the powers, rights and privileges, and be subject to all the restraints so far as such provisions may be applicable, which are contained in the acts incorporating the Nashville & Chattanooga and the Memphis & Charleston Railroad Companies, together with the acts amendatory of the same, as fully as if herein set forth at length, and the same are hereby declared to form and constitute a part of the charter hereby granted to the Nashville & Memphis Railroad Company."

IV.

On February 11, 1852 (see acts Acts 1851-2, p. 204), said General Assembly passed an act to establish a system of internal improvements in this State, which provides that when certain railroad companies therein mentioned, including the Nashville & Memphis Railroad Company, should have built and prepared their roads ready for putting on the iron rails and equipments, the Governor of the State should issue to each company coupon bonds of the State of Tennessee to a certain amount per mile, said bonds to be used to provide for the superstructure and equipment of said roads, and when the whole of a road should be completed the State of Tennessee was to be invested with a "lien, without a deed from the company, upon the entire road, including the stock, right of way, grading, bridges, masonry, iron rails, spikes, chairs and the whole superstructure and equipments, and all the property owned by the company as incident to or necessary for its business, and all depots and depot stations," for the payment of all of said bonds issued to the company as provided in the act, and for the interest accruing on said bonds. Said act was subsequently frequently amended, and the amount of State aid greatly increased.

The railroad companies aided by that system failed to pay to the State (during the late war) the interest upon the bonds loaned them, and after the war, by an act passed November 23, 1865 (see Acts of 1865-6, p. 10), the Governor was authorized to issue bonds of the State to an amount sufficient to pay off the interest then past due, as well as that to fall due January 1, 1866. The proceeds of the bonds directed to be issued, were to be used in paying off the interest coupons which had accumulated during the war. The amount of interest which was due January 1, 1866, by

each railroad company to the State, on bonds issued to the company, was to be charged up to the company on the same terms and conditions of the original loan, and the State was to have a lien upon each of said roads, their *franchises* and property, for the prompt and faithful payment of the principal and interest of the bonds authorized to be issued to pay the interest on the bonds said company should have paid interest on.

By an act passed January 18, 1866 (see Acts of 1865-6, p. 33), the Governor of the State was authorized to issue bonds of the State in certain amounts to specified railroad companies, to aid them in repairing their roads. The act required that the companies aided by it should pay a sinking fund of four per cent., and the State reserved a "lien on all the *profits* of said roads for the money thereby advanced for the repairing of the same," which the State should have the right to enforce if the companies should fail to pay the four per cent. sinking fund and the interest on the bonds as provided by that act; which lien was to be enforced in the manner provided by the act of February 11, 1852, referred to above.

V.

By an act passed December 16, 1853 (see Acts of 1853-4, p. 210), the Nashville & Memphis Railroad Company were authorized to change their name to that of the Memphis & Louisville Railroad Company, or any other name they might desire, but the change of the name was not to deprive the company of any rights, powers, and privileges vested in them by their original amended charter, or by the general law of the State establishing internal improvements passed February 11, 1852, or any amendment of the same, but the same were to exist in full force and virtue and be in all respects as obligatory as though the name of the company had not been changed. On January 20, 1854, the Board of Directors of the Nashville & Memphis Railroad Company changed the name to the Memphis & Ohio Railroad Company as authorized by the act of December 16, 1853. Under their charter and the acts amendatory thereof, the Memphis & Ohio Railroad Company constructed their road from the city of Memphis to the town of Paris, in the State of Tennessee, a distance of about 131 miles; their road was completed about the 11th day of May, 1860.

The Memphis & Ohio Railroad Company failed to pay the State of Tennessee the installment of interest upon the bonds loaned by the State to that company, which fell due July 1, 1867; and the Governor of Tennessee, as he was authorized to do under the act of February 11, 1852, and amendments, appointed a receiver to take charge of the road. The company was at that time greatly indebted to the operatives, as well as to parties who had furnished supplies or advanced money to carry on the work of reconstructing the road after the war; and while the earnings of the road were insufficient to defray the operating expenses, additional means were required to put the road in a safe and efficient condition for the transaction of business. As the State of Tennessee had appropriated no money to make up the deficit that might occur in the operation to any of her roads worked under a receiver, it was evident that if the receiver took charge of the road it would not long remain in running order.

Complainants being greatly interested in the efficient operation of the Memphis & Ohio Railroad as a part of the through line from Louisville to Memphis, had prior to September 1, 1867, advanced the Memphis & Ohio Railroad Company \$125,000, and upon September 1, 1867, at the instance of the president and directors

of the Memphis & Ohio Railroad Company, complainants agreed to lease the Memphis & Ohio Railroad for a term of years; to pay the interest on the State bonds to the State of Tennessee, and to assume the payment of the debts of that company incurred after the war in the reconstruction and operation of the road.

Complainants were to reimburse themselves from the earnings of the road, if it could be done, and if the earnings should exceed the expenditures, as above specified, the surplus was to be paid over to the Memphis & Ohio Railroad Company. At or about the same time, complainants and the Memphis & Ohio Railroad Company entered into a contract looking to the future consolidation of their companies.

On the 21st of February, 1868, the General Assembly of the Commonwealth of Kentucky passed an act to amend the charter of the Louisville & Nashville Railroad Company, which authorized said company by a vote of the majority of the Board of Directors thereof, by any legal means to acquire an interest in or to unite or consolidate with any railroad company or companies chartered by the laws of any other State or States, whose railroad might connect with the Louisville & Nashville Railroad or with the Louisville & Nashville Railroad Company might then have a contract for a consolidation of their companies, so as to make the same one company, with a consolidated stock and property, with one board or directors to control and manage the affairs of said company, and with power in the Louisville & Nashville Railroad Company to form such consolidation by the purchase of the railroad or railroads, other property, rights, franchises and privileges of such other company or companies, or by any other legal mode they might select, provided a majority in interest of the stockholders should accept said amendment, and authorize the Board of Directors to act therein. A majority in interest of the stockholders of said company did accept said amendment, and authorized the Board of Directors to act therein, and the Board of Directors of said company did afterwards execute and carry out the contract previously entered into for the consolidation of the Memphis & Ohio Railroad Company into the Louisville & Nashville Railroad Company. Preparatory to said consolidation, the Louisville & Nashville Railroad Company bought Tennessee State bonds, which they advanced to the Memphis & Ohio Railroad Company to enable the latter company to pay off their debt to the State of Tennessee.

On the 25th of February, 1869 (see Acts of Tennessee, 1868-9, p. 51, sec. 3), the General Assembly of the State of Tennessee passed "An act to liquidate the State debt contracted in aid of railroads in the State of Tennessee," which authorized the respective railroad companies that had created indebtedness to the State, to repay any amount of the principal of such indebtedness in bonds of the State, in such amounts and at such times as might be practicable; and in order to facilitate such of said companies as might wish to avail themselves of the provisions of said act in repaying the indebtedness due to the State respectively, they or any of them, were authorized to consolidate their property in whole or in part with other railroad companies and to adopt the corporate franchises of either of the roads as the stockholders might elect.

By "An act passed by the General Assembly of Tennessee on the 17th of December, 1869, entitled an act to amend an act passed February 25, 1869, and to permit railroads to select a new name," it was provided, that if any of the railroads of said State should consolidate their interests and franchises, as provided by the act of February 25, 1869, they should be authorized to adopt the name of either of the roads so consolidating, or a combination of all the names of all the roads, or a new

name, and under their new name the railroads thus consolidated should succeed to all the privileges and immunities and be subject to all the liabilities of the respective roads existing previous to their consolidation.

In order to avail themselves of the provisions of the act of February 25, 1869, and in order to facilitate the repayment of the indebtedness due from them to the State, the Memphis & Ohio Railroad Company borrowed from the Louisville & Nashville Railroad Company bonds of the State of Tennessee sufficient to pay off the indebtedness of the Memphis & Ohio Railroad Company to the State, and on May 25, 1871, said Memphis & Ohio Railroad Company paid to the State of Tennessee \$2,468,376.66 in bonds of the State of Tennessee, with coupons attached, "in full of all claims and demands of said State against said company."

In pursuance of the contracts and arrangements previously entered into between the two companies, dating back as far as August, 1867, the said Memphis & Ohio Railroad Company consolidated the whole of their property, interest and franchises into the Louisville & Nashville Railroad Company, and the name of the Louisville & Nashville Railroad Company was adopted as the name of the consolidated company, and succeeded to all the privileges and immunities of the Memphis & Ohio Railroad Company. Most of the stock of the Memphis & Ohio Railroad Company was surrendered and cancelled, and in exchange therefor, stock in the Louisville & Nashville Railroad Company was issued upon a certain basis agreed upon in the article of consolidation.

The president, directors and other officers of the Memphis & Ohio Railroad Company went out of office, and since the consolidation the president and directors and other officers of the Louisville & Nashville Railroad Company have acted for and managed the entire property and interests of the Louisville & Nashville Railroad Company, including the road, property and franchises formerly belonging to the Memphis & Ohio Railroad Company; and in the formal articles of consolidation finally executed on the 15th of February, 1871, in pursuance of the previous contracts and negotiations, the Memphis & Ohio Railroad Company transferred and conveyed to the Louisville & Nashville Railroad Company "all its franchises conferred upon it by its original charter from the State of Tennessee, and all amendments thereto, with all its rights, title, claim and interest to its road bed and adjacent grounds, depot grounds, machine shops, water tanks and other property and assets, and lands of every kind, and also its machinery, locomotives and cars of every description, with the same rights to use and operate the road that the said Memphis & Ohio Railroad Company had and enjoyed under the laws of Tennessee heretofore passed, together with all the privileges and immunities heretofore owned and enjoyed by said company under said laws."

A copy of said formal articles of consolidation, and of the written contracts and negotiations leading up thereto, will be produced upon the hearing if deemed material.

Ever since said consolidation took place complainants have been operating said Memphis & Ohio Railroad as one of the divisions of the Louisville & Nashville Railroad, and the "charge of transportation or conveyance of persons, goods, merchandise and produce" over said Memphis & Ohio Railroad is now and has been for many years past far below the maximum rates established by the charter of the Memphis & Ohio Railroad Company; in fact, the net earnings of said road under a

most economical management have not been and are not sufficient to pay its operating expenses, the interest on its bonded debt and the expense of keeping it in a safe and proper condition.

VI.

On January 28, 1852, the General Assembly of Tennessee passed an act to charter the Memphis, Clarksville & Louisville Railroad Company. The first section of said charter provides that certain named individuals with their associates, who shall be stockholders in said company, and their successors, shall be a body corporate and politic under the laws of Tennessee, with succession for ninety-nine years.

The tenth section of the charter is as follows: "That said company shall be and they are hereby vested with all the rights, powers and privileges and subject to all the restrictions of the Nashville & Chattanooga Railroad Company, except otherwise provided in this charter."

The exceptions referred to do not relate to the matters involved in this bill. (See Acts 1851-2, p. 123, sec. 10).

Said company were duly organized under said charter, and constructed their road from Paris, Tennessee, to Guthrie, on the line between the States of Tennessee and Kentucky.

Said road was completed about September 1, 1861.

VII.

The State of Tennessee loaned to said Memphis, Clarksville & Louisville Railroad Company a large amount of bonds of the State under the act of February 11, 1852, mentioned above and known as the general improvement law.

The twelfth section of said act is as follows: "That the State of Tennessee expressly reserves the right to enact by the Legislature thereof hereafter all such laws as may be deemed necessary to protect the interest of the State, and to secure the State against any loss in consequence of the issuance of bonds under the provisions of this act, but in such manner as not to impair the vested rights of the stockholders of the companies." (See Acts of 1851-52, p. 210, sec. 12).

Said company having defaulted on the interest which they had agreed to pay to the State on the bonds loaned to them by the State, the State, under the power reserved to them by the said act of February 11, 1852, on the 1st day of July, 1865, took said road out of the possession and control of said company, and placed it in the possession of a State receiver, and said road continued to be operated and managed exclusively by receivers appointed by the State of Tennessee from the 1st day of July, 1865, down to the 30th day of September, 1871, when it was purchased by complainants as hereinafter stated.

VIII.

Under the power reserved by the twelfth section of the act of February 11, 1852, the General Assembly of Tennessee, on December 21, 1870, passed an act directing that a bill be filed in the Chancery Court at Nashville in the name and behalf of the State, to which all delinquent railroad companies, their respective stockholders, holders of the bonds, creditors, and all persons interested in the said several roads, should be made defendants and brought before the court, and said court was invested with exclusive jurisdiction to hear, adjudicate and determine, all questions of law and matters of controversy of whatever nature, whether of law or of fact, that

had arisen or that might arise touching the rights and interest of the State, and also of the stockholders, bondholders, creditors and others in said roads, and to make all such rules, orders and decrees, interlocutory and final, as might be deemed necessary in order to a final and proper adjustment of the rights of all the parties, preliminary to a sale of the interest of the State in said roads; also to declare the exact amount of indebtedness of each of said companies to the State, and likewise to define as might be thought proper what should be the rights, duties and liabilities of a purchaser of the State's interest in said roads, or either of them, and what should be the reserved rights of said companies, stockholders, and others respectively, as against said purchasers after such sales, under the existing laws of the State.

Section ten of the act is as follows: "That upon the sale of any of the franchises of either of the railroad companies by the Commissioners under the provisions of this act, all the rights, privileges and immunities appertaining to the franchises so sold, under its act of incorporation and the amendments thereto, and the general improvement law of the State and acts amendatory thereof, shall be transferred to and vest in such purchaser, and the purchaser shall hold said franchises subject to all liens and liabilities in favor of the State as now provided by law against the railroad companies. (See Public Acts 1870-1, ch. 23, p. 25, section 10).

Complainants will now show that on January 20, 1871. the State of Tennessee filed her original bill in the Chancery Court at Nashville against various delinquent railroad companies, and among them the Memphis, Clarksville & Louisville Railroad Company; also against their respective stockholders, "the holders of the bonds issued by the State to said companies," the holders of the bonds issued by said companies, the creditors of said companies, and all other persons interested in said several roads or companies, all of whose names and residences were unknown, except certain designated persons and corporations, among whom were Gustavus A. Henry and Montgomery county, stockholders, and, perhaps, creditors, of the Memphis, Clarksville & Louisville Railroad Company. After setting forth the various acts of the Legislature forming the internal improvement system, the amount of bonds loaned to each company, the amount of interest due to the State from each company, the financial condition of each company, and the character of the road and equipments, the bill charged that all of the companies were insolvent; that they were unable to pay the accruing interest or sinking fund, or the past due interest or sinking fund, and had no reasonable hope of ever paying the principal of the bonds issued to them, as the expenses of running them had, in nearly every instance, exceeded the income.

It was, therefore, insisted that the failure of said companies to comply with any one of the conditions upon which State aid was extended to them, made a forfeiture of all their rights under the internal improvement laws, and authorized the State to demand a sale of all the property and effects, rights, privileges and franchises of said several companies; the proceeds of sale to be applied first to the extinguishment of the debt due to the State, with interest and costs, and the surplus, if any, to the satisfaction of other debts, in the order of their liens, the State claiming in any event priority of satisfaction out of the incomes or sales of said roads for the whole of the indebtedness of said companies for bonds loaned them by the State, over all other creditors or claimants of every nature and kind whatsoever.

The bill prayed that all said companies, their respective stockholders, the holders of State bonds issued to them respectively, the holders of the bonds of said compan-

ies issued by them and secured by liens, pledges, or mortgages on said roads, all creditors of said companies, and all persons interested in said roads, be made defendants by service of process on those named, and by publication as to those whose names and residences were unknown, according to the course of the court; that all of said defendants, or so many of them of the different classes as the court might deem sufficient to represent all of each class, be required to answer the allegations of the bill upon oath.

It further prayed the court to make all such decrees as might be necessary to a final and proper adjustment of the rights of all the parties, preliminary to a sale of the interest of the State in said roads, and also to declare the exact amount of indebtedness of each of said companies to the State; to define as might be thought proper, what should be the rights, duties and liabilities of a purchaser of the State's interest in said roads, and what should be the reserved rights of said companies, stockholders, bondholders and others respectively, as against said purchasers, after such sale under the existing laws.

The bill further prayed the court to decree a sale of said roads, with all their property, franchises and rights, if necessary or proper, upon final hearing, as manifestly for the interest of all parties, and expressly or tacitly assented to by such parties, such sale to be made by the Commissioners appointed by the Legislature.

On January 20, 1871, an order was made that all said unknown stockholders, holders of the bonds issued by the State to said companies, or the bonds issued by said companies, creditors of said companies, and other persons interested in said several roads or companies, enter their appearance in said cause at a special term of said court, to be held at Nashville, on the first Monday in March, 1871, and that all of said defendants, or so many of them of the different classes as the court might deem sufficient to represent all of each class, be required to answer the bill on oath, and put in such defense as they might deem proper, or the said bill would be taken for confessed as to them, and set for hearing *ex parte*; it was further ordered that a copy of said order be published for four consecutive weeks in the *Nashville Union and American* and the *Republican Banner*. Said order was published as directed in said newspapers, they having the largest circulation of any two newspapers in Nashville, and probably of any two in the State. By an oversight, the bill was not sworn to, and the order of publication was, therefore, supposed to be technically invalid, and ineffectual to bring before the court the parties whose names and residences were unknown. The Memphis, Clarksville & Louisville Railroad Company thereupon filed a plea, raising the objection that said parties were not properly before the court, which plea being allowed upon argument, the State was permitted by the court to file an amended and supplemental bill, in which it was stated that before the filing of the original bill the State did make, by its solicitor, diligent inquiry to ascertain the names and residences of the individuals constituting the different classes of parties authorized to be made defendants to said bill by general designation, and was, at that time, only able to ascertain the names and residences of those of the several classes whose names were specifically given in said bill, and that even after the original bill was filed, the State upon diligent inquiry had not found any of the holders of the State bonds issued to any of the delinquent railroads, except Dempsey Weaver, of Davidson county, Tennessee, who was the holder of one of the bonds issued to the Edgefield & Kentucky Railroad Company, one of the bonds issued to the Memphis, Clarksville & Louisville Railroad Company, and one issued to the Nashville & Northwestern Railroad

Company, all of which companies were defendants to said bill. Said amended bill also gave the names of several individuals who were the holders of bonds issued by the Memphis, Clarksville & Louisville Railroad Company, and of several who claimed to be creditors of said company, and then stated that after diligent inquiry the State had not been able to ascertain the names and residences of any of the several classes of parties made defendants, except those mentioned in the original and in the amended bill.

It prayed that the Memphis, Clarksville & Louisville Railroad Company and the other parties made defendants to the original bill, be required to answer the amended bill; that said Dempsey Weaver, and the individuals whose names were given as holders of bonds issued by said company, or as creditors of said company, be made defendants by process of subpoena and copy bill, and that all the individuals embraced in the several classes, who were made defendants by general designation, and whose names and residences were unknown and could not be ascertained after diligent inquiry as aforesaid, be made defendants by publication for the time and in the mode prescribed by law, etc.

The court by decree of April 15, 1871, permitting said amended bill to be filed, ordered the defendants to appear and make defense on the 15th of May, 1871, and that publication in lieu of personal service be made accordingly. It was further ordered, that where the classes of defendants were numerous, a few of each class, if their names and residences could be ascertained, should be alone required to be made defendants by name as representatives of the whole class.

Said amended bill was duly sworn to by the State's solicitor, and the order of publication duly made and published for the appearance of the holders of the bonds issued by the State to the Memphis, Clarksville & Louisville Railroad Company, it being stated in said order that the names and residences of said holders, with the exception of said Weaver, were unknown, and could not be ascertained after diligent inquiry.

Dempsey Weaver appeared and answered, admitting that he was the holder of one of the bonds of the State originally issued to said railroad company, and submitted to the court the whole question of his rights and lien, if any, in said road.

An answer was filed in said cause by the county of Montgomery, as a stockholder in said company; also by G. A. Washington, a holder of bonds issued by said company, and petitions were filed by a number of persons claiming to be holders of debts created by the State receivers while operating said road. A demurrer was filed by the Memphis, Clarksville & Louisville Railroad Company, and the original and amended bills were taken for confessed as to all other defendants. On July 6, 1871, a decree was rendered overruling the said demurrer, and said company failing to answer, said bills were taken for confessed against them. Thereupon such proceedings were had that on September 20, 1871, a decree was rendered in said cause, reciting, among other things, that it appeared to the satisfaction of the court that the holders of the State bonds issued by the State to said company; the holders of bonds issued by said company, and secured by mortgage of the road or its income; the general creditors of said company; the stockholders, and all other persons interested in said road or company, including creditors whose claims were created by, or while the road was managed by receivers—were all properly made defendants, and represented; that the said company was justly indebted to the State in the sum \$2,454,125 92, for bonds issued by the State, and interest thereon; and it being admitted that said company was hopelessly insolvent, and that their property, rights

and franchises were not of sufficient value by many thousands of dollars to pay the amount due on said bonds, the court was of opinion, and so decreed, that under the circumstances which had happened, the said company having utterly failed to comply with any of the essential conditions of the internal improvement laws under which the bonds were issued, the court had the power, not only to sell the debt, mortgage and interest of the State in said road, but also the road itself, with all its rights, property and franchises, and especially as said company and stockholders consented thereto. It was therefore ordered, adjudged and decreed that said road be turned over to Hon. R. J. McKinney, A. Wright, F. B. Fogg and D. W. C. Senter, Governor, T. H. Butler, Secretary of State, and E. R. Pennebaker, Comptroller, the Commissioners of Railroads for the State of Tennessee, and who were thereby also appointed special commissioners of said court, and authorized and empowered to sell said road, its property, rights and franchises, as well as the debt, mortgage and interest of the State therein, to any one and in any manner, publicly or privately, and at any price they might choose, not less than the minimum fixed by the decree, and to make report to said court for such further action as might be necessary or proper.

The court was of opinion, and so decreed, that neither the State of Tennessee, nor any one claiming by, through or under it, would have any right to enforce the collection of the principal or interest of the State bonds so issued as aforesaid, against any purchaser who might purchase said company's road, its property, rights and franchises under the decrees in said cause, either directly or through the commissioners, if such purchaser fully complied with all the terms of sale as fixed by the decree and the acts of Assembly, or as agreed upon with the commissioners; nor to subject said road, its property, rights and franchises, to seizure or sale for the payment of said bonds and interest.

The court was further of opinion, and so decreed, that the lien of the State to the full extent of the debt of said company for the State bonds issued to it, and the interest thereon as aforesaid, as ascertained by said decree, was prior and superior to the claims of all other creditors of said company of every nature and kind whatever, and whether secured by mortgage, pledge, judgment or otherwise, or without any security.

The court was further of opinion, and so decreed, that the State debt as ascertained as aforesaid, largely exceeded the full value of the company's road, its rights, property and franchises, together with the stock and the other privileges upon which it was a lien, and that the State might therefore by agreement with said company, its directors and stockholders, or without such agreement, have a decree to sell said company's road, its rights, property and franchises, and the debt, mortgage and interest of the State in the same, at any price that might be agreed on less than the amount of said debt, and vest the purchaser with a full, perfect and complete title, free from the claims of stockholders, holders of State bonds, holders of mortgage bonds, creditors of every kind and description, and of all and every person or persons claiming an interest in said company or road.

The court was further of opinion, and so decreed, that the said company, its directors and stockholders who had consented to said decree, and to the previous decrees in said cause, were competent to consent to the same, and that the counsel for the State were competent to consent for the State; and that upon a sale being made under said decree the said company and its stockholders would cease to have any further rights, legal or equitable, in and to said company's road, its rights, property

and franchises so sold, and the said purchaser would take and be vested with all the title and interest of said company and its stockholders in and to said road, its property, rights and franchises, free from all claims whatsoever, except those of the State reserved by the contract of sale and the act under the provisions of which the sale should be made.

The court was further of opinion, and so decreed, that upon a sale of the franchises of said railroad company by the commissioners under said decree, and the provisions of the said act of 21st of December, 1870, all the rights, privileges and immunities appertaining to the franchises so sold under its act of incorporation and the amendments thereto, and the general internal improvement law of the State and the acts amendatory thereof, would pass, and be transferred to and vested in such purchaser, and the purchaser would hold said franchises subject to all liens and liabilities in favor of the State as were then provided by law against the railroad companies so far as might be necessary to secure the purchase money as aforesaid, and the other rights of the State under the decrees in said cause and the said act of the Legislature.

The court was further of opinion, and so decreed, adjudicated and determined, that the purchaser, inasmuch as under said decree he would also purchase the debt, mortgage and interest of the State as aforesaid, would, independent of his purchase of the company's road, its rights, property and franchises as aforesaid, have the right to take immediate and exclusive possession of said road, its rights, property and franchises as aforesaid, and to use and operate the same as a railroad, with all the rights and powers of the original charter of said company and amendments thereto, until the whole amount of said debt and interest then due to the State as above described, and the interest thereafter to become due on the same, should be fully paid to the purchaser; and as purchaser of the road, its rights, property and franchises, he would be entitled to own, use and operate said road with all the powers and franchises of the original charter until said charter should have expired. It was therefore ordered, adjudged and decreed accordingly, and that the rights of the parties and purchaser be adjudged and settled in accordance with the opinions as hereinbefore expressed.

On October 2, 1871, the said Commissioners, appointed by said court, reported that they had sold to complainants the Memphis, Clarksville & Louisville Railroad, its property and franchises, and the debt, mortgage and interest of the State therein as set out in the decree of sale, upon the terms and conditions of the decree, and at the price of \$1,700,000, payable in the bonds of the State with certain coupons attached, which report being read and not excepted to, was confirmed, and it was ordered that the complainants, as purchasers, be at once put in possession of the road bought by them, with all the property, franchises and effects bought by them as aforesaid.

It was further ordered that complainants, as purchasers, take and hold the Memphis, Clarksville & Louisville Railroad, its property and franchises, and the debt, mortgage and interest of the State against said company, as the rights of the purchasers had been declared by the decree of September 20, 1872, above referred to.

No appeal or writ of error was ever taken by any one to review or reverse said decrees, and the same remain in full force.

Complainants have fully complied with all the terms of the decree of sale, and the acts of the General Assembly relating thereto. They have satisfied all the claims that were reserved by the State by the contract of sale, or by the act under

the provisions of which the sale was made. They have discharged all liens and liabilities in favor of the State, so far as were necessary to secure the purchase money as aforesaid, and the other rights of the State under the decrees in said cause, and the said acts of the Legislature.

No part of the debt or interest then due to the State, or of the interest that has since become due on the same, has ever been paid to complainants as purchasers of the debt and interest of the State.

Complainants will file as exhibit to this bill, a duly certified copy of so much of the record of the case of the State of Tennessee v. The Edgefield & Kentucky Railroad Company and others as relates to the sale of the Memphis, Clarksville & Louisville Railroad, and they pray that the same may be taken as part hereof, but need not be copied unless called for.

Ever since complainants purchased it they have been operating said Memphis, Clarksville & Louisville Railroad as one of the divisions of the Louisville & Nashville Railroad, and "the charge of transportation or conveyance of persons, goods, merchandise and produce" over said Memphis, Clarksville & Louisville Railroad is now, and has been for many years past, far below the maximum rates established by the charter of the Memphis, Clarksville & Louisville Railroad Company. In fact, the net earnings of said road, under a most economical management, have not been and are not sufficient to pay its operating expenses, its interest on its bonded debt, and the expense of keeping it in a safe and proper condition.

Said Memphis, Clarksville & Louisville Railroad, together with the Memphis & Ohio Railroad, and a branch of the Louisville & Nashville Railroad extending from Guthrie to Bowling Green, Kentucky, form a through line from Memphis, Tennessee, to Louisville, Kentucky.

IX.

On February 13, 1852, the General Assembly of the State of Tennessee passed an act to incorporate the Edgefield and Kentucky Railroad Company.

The first section of said charter provides that certain named individuals, with such other persons or corporations, as might be associated with them, should be constituted a body politic and corporate with power to construct a railway from some point convenient to Nashville, on the north side of the Cumberland river, to the Kentucky State line, so as to unite with any company that had been or might be incorporated by the Legislature of the State of Kentucky for the construction of a railroad from either of the cities of Lexington, Frankfort, Louisville, Danville, Bowling Green or Henderson, in Kentucky, to the city of Nashville.

The sixth section of the charter is as follows: "That the company hereby incorporated is invested, for the purpose of making and using said road, with all the powers, rights and privileges, and subject to all the liabilities and restrictions that are conferred and imposed on the Nashville and Chattanooga Railroad Company by an act passed on the 11th of December, 1845, so far as the same are not inconsistent with the provisions of this act." See Acts of 1851-2, p. 339, sec. 6.

On January 1, 1852, said General Assembly passed an act to charter the Nashville and Southern Railroad Company. The first section provides, that "said company shall have and enjoy all the rights, powers and privileges, and be subject to all the liabilities and restrictions prescribed in the charter of the Nashville and Chattanooga Railroad Company, and in the various amendments thereto, except as

herein further provided." The exceptions referred to have no relation to the matters involved in this bill. See Acts of 1851-2, p. 281, sec. 1.

On December 15, 1855, said General Assembly passed an act to amend the charter of the Edgefield and Kentucky Railroad Company. Section 2 is as follows: "That the said company shall be entitled to all the rights and privileges that were conferred upon the Nashville and Southern Railroad Company, by an act of the General Assembly of the State of Tennessee, passed January 1, 1852, entitled an act to charter the Nashville and Southern Railroad Company." See Acts of 1855-6, p. 13, sec. 2.

Said company were duly organized under said charter, and constructed their road from Guthrie, on the line between the States of Tennessee and Kentucky, to Nashville, Tennessee. Said road was completed about the — day of —, 18—.

Said company borrowed a large amount of bonds from the State of Tennessee under the act of February 11, 1852, heretofore referred, and having failed to pay the interest to the State upon the bonds loaned to them by the State, the State, under the power reserved to it in said act, took said road out of the possession of said company on the — day of, — 18 —, and it continued to be operated and managed exclusively by receivers appointed by the State from that date down to the day it was sold, as will be hereinafter stated.

X.

Said Edgefield and Kentucky Railroad Company were made parties defendant to the bill filed by the State of Tennessee on January 20, 1871, in the Chancery Court at Nashville, against the various delinquent railroads. Proceedings were had in said cause in regard to the sale of said road, similar in all substantial particulars to the proceedings had in regard to the Memphis, Clarksville and Louisville Railroad, reference to which has been heretofore made in this bill.

On May 23, 1871, a decree was rendered in said cause, in which it was recited, that it had been agreed by the parties that the Edgefield and Kentucky Railroad Company was indebted to the State of Tennessee, on January 1, 1871, in the sum of \$2,081,179.71; that said company was wholly insolvent and unable to pay the State said debt, or the interest on the same; that the State had a lien or mortgage upon the entire road of said company, including the stock, right of way, grading, bridges, masonry, iron rails, spikes, chairs, and the whole superstructure and equipments, and all the property owned by said company necessary for its business, and all depots and depot stations, its franchises and property prior and superior to all other liens whatsoever and howsoever created, and was entitled to enforce the same for the payment of its said debt by a sale at that time (the stockholders and directors of said company consenting thereto) of said road, and all the property and franchises and rights of way as above set forth. It was therefore ordered that it be referred to the Clerk and Master to take proof, and report the fair minimum value of said road, including the stock, right of way, grading, bridges, masonry, iron rails, spikes, chairs, and the whole superstructure and equipments, and all the property owned by the company and necessary for its business, and all depots and depot stations, its franchise and property.

On June 2, 1871, the Clerk and Master reported that \$906,000 in State bonds was a fair minimum value. His report was confirmed, and the court ordered and decreed that the Edgefield and Kentucky Railroad Company should have for sixty

days the exclusive right to purchase said railroad, and also the stock, right of way, property, and franchises, as above set forth, at \$900,000 in State bonds, payable in certain installments; and if said Edgefield and Kentucky Railroad Company should fail to purchase within said sixty days, then that any number of the stockholders of the company, including Davidson county, and such persons as the stockholders might admit into their association, should have for thirty days thereafter the right and privilege to purchase said road, and its property, stock, right of way, and franchises, as above set forth, at said sum of \$900,000 in State bonds; but, if at the expiration of ninety days from said decree, the said company, or any of its stockholders, should have failed to purchase, then certain Commissioners appointed by the court were ordered to sell all the property and franchises of said Edgefield and Kentucky Railroad Company, or in their discretion the interest of the State therein.

On July 6, 1871, a decree was rendered in said cause, in which it was recited that decrees had heretofore been entered in the cause against all of the railroad companies except two, and that all of them except one had consented to a sale of their said several roads, with all of their rights, privileges and franchises, and decrees had been entered accordingly, preference for a limited time being conceded to the said companies respectively, and then to their stockholders, or such of them as might choose to join in the purchase, to become the purchasers of their said several roads at the minimum price fixed by the court in accordance with the act of December 21, 1870, above referred to. And it appearing that it was made the duty of the court by the said act, to adjudicate and determine all questions of law and matters of controversy of whatever nature, whether of law or fact, that had arisen or might arise, touching the right and interest of the State, and also of the stockholders, bondholders, creditors and others in said roads; and likewise to define, as might be thought proper, what should be the rights, duties and liabilities of a purchaser of the State's interest in said roads, or either of them, and what should be the reserved rights of said companies, stockholders and others respectively as against such purchasers after such sale, under the existing laws of the State; the court was of opinion, and so decreed, that the lien of the State to the full extent of the debt of the said several companies for the State bonds issued to them severally as aforesaid, and the unpaid interest thereon as ascertained by the decree in said cause, was prior and superior to the claims of all other creditors of said several companies of every nature and kind whatsoever, and whether secured by mortgage, pledge, judgment or otherwise, or without security; that the State debt as ascertained as aforesaid, largely exceeded in every instance the full value of the several roads upon which it was a lien, its rolling stock and other property, rights, privileges and franchises, and that the State might therefore by agreement with the said several companies, sell said roads, property and franchises, in satisfaction of their said debt, at any price which might be agreed upon, less than the amount of said debt, and vest the purchaser other than the companies themselves, with a full, perfect and complete title, free from the claims of stockholders, holders of State bonds, holders of mortgage bonds, creditors of every kind, and all and every person or persons claiming an interest in said companies or roads.

The court was further of opinion, and so decreed, that upon a sale being made upon said decree, the said companies and their stockholders would cease to have any further right, legal or equitable, in and to the property, rights and franchises so sold; and the said purchasers other than the company would take the road,

property and franchises, free from all claim whatever, except those of the State reserved by the contract of sale, and the act under which the sale was made.

The court was further of opinion, and so decreed, that upon the sale of any of the franchises of either of said railroad companies by the Commissioners, under the decrees in said cause, and the provisions of said act of the 21st of December, 1870, all the rights, privileges and immunities appertaining to the franchises so sold under its act of incorporation, and the amendments thereto, and the general improvement law of the State, and the acts amendatory thereof, should be transferred to and vest in such purchaser; and the purchaser should hold said franchises subject to all liens and liabilities in favor of the State as then provided by law against the railroad companies, so far as might be necessary to secure the purchase money as aforesaid, and the other rights of the State under the decrees in said cause, and the said act of the Legislature.

It was therefore ordered, adjudged and decreed accordingly, and that the rights of the parties and purchaser be adjudged, and settled in accordance with the opinion therein expressed.

On October 2, 1871, the Commissioners appointed by the court reported that they had sold the Edgefield & Kentucky Railroad, its fixtures and rolling stock, to Davidson county and certain individual stockholders for \$900,000 in bonds of the State. Said report was presented together with the report of sales of several other roads, and it was ordered and decreed by the court that the several sales be confirmed; that the several purchasers be at once put in possession of the roads severally bought by them, with all the property and franchises and effects so bought by them as aforesaid.

The bond given by Davidson county and others as purchasers, for the payment of the installment of purchase money, shows upon the face of it that they bought the entire railroad of the Edgefield & Kentucky Railroad Company, with all its rights, property and franchises. Complainants file herewith, as exhibit —, a certified copy of so much of the record in said case as relates to the sale of the Edgefield & Kentucky Railroad Company. They pray that it be taken as a part hereof, but not to be copied unless called for.

XI.

On January 6, 1872, the county of Davidson and the other co-purchasers under the chancery sale, sold and conveyed to E. F. Winslow, all the interest they had acquired in said Edgefield & Kentucky Railroad, its franchises, property, rights, claims, privileges and stock; and on September 9, 1872, said E. F. Winslow and his wife, Laura B. Winslow, sold and conveyed the same to the Nashville, Chicago & St. Louis Railroad Company, by whom the same was reconveyed on September 26, 1872, to said Edward F. Winslow, in trust, to secure a debt of \$1,800,000, gold coin.

Said Nashville, Chicago & St. Louis Railroad Company was afterwards consolidated with other companies incorporated by the Legislatures of Kentucky, Indiana and Illinois into a corporation known as the St. Louis & Southeastern Railway Company (consolidated).

On October 1, 1872, said last named company conveyed the same to George Opdyke and Philo C. Calhoun, in trust, to secure \$4,922,000 of mortgage bonds.

The said Calhoun and Opdyke afterwards filed a bill in this court against said

St. Louis & Southeastern Railway Company (consolidated), and on November 1, 1878, a decree was rendered by this court adjudicating among other things that, by virtue of said consolidation, said St. Louis & Southeastern Railway Company (consolidated) acquired and became vested with all and singular the rights, powers, privileges, immunities and franchises, together with the property, real, personal and mixed, which the said several companies respectively held, possessed, or owned at the time of said consolidation.

It was ordered that said mortgages, or trust deeds, be foreclosed, and that unless the money due thereunder was paid by a certain day, said Edgefield & Kentucky Railroad, and the other property, real, personal and mixed, and all the franchises, rights, claims and privileges conveyed or intended to be conveyed by said Winslow and wife to said Nashville, Chicago & St. Louis Railroad Company, and also all other property of every description, in anywise appertaining to the said railroad, whether real or personal, including all lands, buildings, bridges, iron rails, equipments, rolling stock, and other stock appertaining to said railroad, and also all the franchises, rights and privileges thereof, together with all the franchises, rights, privileges and immunities of the said St. Louis & Southeastern Railway Company (consolidated), appertaining to said railroad, or its property, within the jurisdiction of this court, be sold upon certain terms specified in said decree.

The money not having been paid within the time ordered by the court, said road property, rights and franchises were, on the — day of —, 18—, sold by W. B. Reese, special commissioner of this court, pursuant to the terms of said decree. Said sale was duly affirmed by decree of this court, and a deed was ordered to be made to the purchasers, Jacob H. Schiff, John B. Dumont and George Opdyke, a committee representing the holders of certain bonds entitled to the proceeds of the sale, and on July 29, 1879, Lewis T. Baxter, clerk of this court, together with Philo C. Calhoun and George Opdyke, trustees; and the St. Louis & Southeastern Railway Company (consolidated), conveyed said railroad, its property, rights and franchises to said purchasers.

Complainants were the owners of a large amount of the bonds participating in the benefit of said foreclosure proceedings, and the purchase was in reality for the benefit of complainants, though the legal title, for certain considerations not necessary to be here mentioned, was taken in the name of said committee.

Complainants, as the equitable and real purchaser, took possession of said road, its property, rights, franchises and privileges, on the 1st day of August, 1879.

Ever since complainants took possession of it under their purchase, they have been operating said Edgefield & Kentucky Railroad as one of the divisions of the Louisville & Nashville Railroad, and the "charge of transportation or conveyance of persons, goods, merchandise and produce" over said Edgefield & Kentucky Railroad, is now and has been for many years past, far below the maximum rates established by the charter of the Edgefield & Kentucky Railroad Company.

Said railroad company, together with roads owned by complainants in Kentucky, Indiana and Illinois, form a through line from Nashville, Tennessee, to East St. Louis, Illinois.

XII.

On January 23, 1852, the General Assembly of Tennessee passed an act to charter the Tennessee & Alabama Railroad Company. The first section of said act is as follows:

"That a body politic and corporate is hereby constituted by the name and style of the Tennessee & Alabama Railroad Company, for the purpose of constructing a railroad from Nashville, by way of Franklin, to the line between the States of Tennessee and Alabama, in the direction of Florence, in the State of Alabama, and said company shall have all the rights, powers and privileges, and be subject to all the liabilities and restrictions conferred and imposed upon the charter of the Nashville & Chattanooga Railroad Company, and all the various amendments, etc., thereto." (See Acts of 1851-2, p. 93, sec. 1.)

Said company were duly organized under said charter, and constructed a railroad from Nashville to Columbia, with a branch from Columbia to Mt. Pleasant, in the State of Tennessee. Said road was completed on the — day of —, 1859.

XIII.

On November 30, 1853, the General Assembly of Tennessee passed an act to incorporate the Central Southern Railroad Company, and for other purposes.

The fifteenth section of said act is as follows:

"That a body corporate and politic is hereby incorporated and constituted by the name and style of the Central Southern Railroad Company, for the purpose of constructing a railroad from a point of intersection with the Tennessee & Alabama Railroad at Columbia, in Maury county, by way of Pulaski, in Giles county, to the Alabama line in the direction of Athens and Decatur, Alabama, to connect with any railroad that may be constructed from Decatur, Alabama, to said State line, in the direction of Pulaski, and the said company shall have all the powers and privileges, and be subject to all the restrictions and liabilities prescribed in the charter of the Nashville & Chattanooga Railroad, and in the various amendments thereunto, except as hereinafter prescribed; provided nothing contained in this section shall be so construed as to require the aid of the State to said road."

The exceptions referred to do not relate to the matters involved in this bill. (See Acts of Tennessee of 1853-4, p. 23, sec. 15.)

Said company were duly organized under said charter, and constructed their road from Columbia, Tennessee, to the line between the States of Tennessee and Alabama. Said road was completed November 20, 1860.

On April 19, 1866, the General Assembly of Tennessee passed an act, of which the fifth section is as follows:

"That for the purpose of uniting and consolidating the Tennessee & Alabama Railroad Company and the Central Southern Railroad Company into one, the directors of said companies be and they are hereby authorized to agree upon the terms thereof, and to adopt all necessary and proper measures, agreements and obligations to effect the same; provided said terms of consolidation when perfected by the directors of said companies shall be submitted to a vote of the stockholders of said companies, and if assented to by a majority of the stockholders, the same shall be binding upon said companies, and that thereafter and upon official report thereof to the presidents of the respective companies and the Comptroller of the State, said consolidated and united companies shall be known and styled as the Nashville & Decatur Railroad Company, by which name it shall sue and be sued, and be entitled to all the rights and privileges and be subject to all the liabilities and restrictions of a body corporate."

The sixth section is as follows:

"That the said Nashville & Decatur Railroad shall, for its government, be entitled to all the rights and privileges and subject to all the restrictions and liabilities conferred and imposed upon the Nashville & Chattanooga Railroad Company; provided, that no State aid is intended to be extended to said Nashville & Decatur Railroad; provided further, that no new liability to the State of Tennessee is intended to be imposed hereby upon said Tennessee & Alabama Railroad Company and the Central Southern Railroad Company."

The seventh section is as follows:

"That the directors of said Tennessee & Alabama Railroad Company, in maturing the terms of consolidation hereinbefore provided, may adopt such by-laws, rules and regulations, not inconsistent with the laws of Tennessee and the United States, as may be necessary and proper to the successful operation and management of said consolidated company, and may provide in said terms for the discharge of their respective indebtedness so as to bind said consolidated company therefor; provided, that nothing in this act shall be construed to alter or affect the lien of the State of Tennessee for aid heretofore extended to said companies, but the same shall be extended and held as a liability against said consolidated company."

The eighth section is as follows:

"That an election shall be held by the stockholders of the Tennessee & Alabama Railroad and the Central Southern Railroad jointly on the first Monday in May next, at the town of Pulaaki, in Giles county, for directors for said roads thus combined, who shall be elected in the same manner as is now provided for the Tennessee & Alabama Railroad in its charter, and shall hold their office for one year and until their successors are elected and qualified."

The ninth section is as follows:

"That the Tennessee & Alabama Railroad and the Central Southern Railroad thus consolidated may, through their directors thus elected, be consolidated with the Alabama & Tennessee *Central* Railroad upon such terms as may be agreed upon between them and approved by the stockholders of said roads, to be thereafter known as the Nashville & Decatur Railroad—such terms not to be in conflict in any wise with those herein contained, but may be supplemental or in addition thereto, provided the consolidation herein provided for be approved by act of the Legislature of the State of Alabama heretofore or hereafter passed. And said railroads thus consolidated may, by their stockholders regularly convened, upon thirty days' notice in the newspapers of Nashville and Huntsville elect directors to serve them for the term of twelve months, and until their successors shall be elected."

The tenth section is as follows:

"That the capital stock of said united companies shall be the aggregate amount of their respective charters with the addition thereto of \$———, and that this act shall take effect from and after its passage." (See Acts of 1865-6, pp. 219, 220.)

The consolidation provided for by said statute was approved by an act of the Legislature of Alabama. The terms of the consolidation were by appropriate action referred to an executive committee, which committee embodied their suggestions in the form of a resolution, which was as follows:

"Resolved, That under the authority delegated to the Executive Committee by the respective stockholders of the Tennessee & Alabama, Central Southern, Tennessee & Alabama Central Railroad Companies, the Committee have agreed that the capital stock of each company shall represent the value of its road, and that therefore each of the companies herein mentioned shall surrender to the Nashville & Decatur Railroad Company all of its rights, franchises and property; the Nashville & Decatur Railroad Company assuming to pay all debts owing by the several companies, and being hereby especially pledged to protect all persons who have made themselves individually liable for the debts of any of the several companies, and that the stockholders of each company shall be entitled to and receive credit for the same amount of stock in the Nashville & Decatur Railroad Company that they own in any of the several companies; these constituting and comprising the whole basis of settlement."

On November 21, 1866, at a convention of stockholders of the Tennessee & Alabama, the Central Southern, and the Tennessee & Alabama Central Railroad Companies, the resolution aforesaid was unanimously confirmed by the convention, and the three roads were "declared to be united and consolidated under the style of the Nashville & Decatur Railroad."

On March 8, 1867, the General Assembly of the State of Tennessee passed an act, the first section of which is as follows:

"That the consolidation aforesaid be and the same is hereby as fully confirmed in all respects as if the convention had been held on the first Monday of May, 1866, and that the said consolidation and all acts of said convention be and the same are hereby declared valid."

Section 4 is as follows:

"That a majority of the said Board of Directors be and the same are hereby authorized to issue not exceeding \$500,000 of preferred stock in said consolidated company, or to issue income bonds of said company to an amount not exceeding \$500,000, at a rate of interest not to exceed two per cent. per annum, as they may elect; *provided*, that nothing in this act shall be so construed as to invalidate the lien or priority of the State against said railroads hereby consolidated." See Acts of 1866-7, pp. 157-8.

The Code of Tennessee provides that the several railroad companies may lease any other railroad connected therewith, and upon such terms and conditions as may be agreed upon between the President and Directors of the contracting companies, but that all railroad companies availing themselves of this provision "shall be liable to all the liens in favor of the State, and to all liabilities imposed by their charters or the general laws of the land, in the same manner as the company making the lease would have been had no lease been made." See Code of Tennessee, secs. 1424-5.

On May 4, 1871, the said Nashville & Decatur Railroad Company leased their road, together with all of its franchises and privileges, to the Louisville & Nashville Railroad Company, for a period of thirty years; the rental reserved by said lease was that the lessee agreed to pay all the debts and liabilities of the lessors, in which was included their bonded debt and their floating debt, both not exceeding in the aggregate \$2,450,000, and to pay a dividend of six per cent. per annum upon the lessor's capital stock, amounting to \$1,512,184. A copy of said lease is herewith filed.

Ever since complainants took possession of it under said lease, they have been operating said Nashville & Decatur Railroad, as one of the divisions of the Louisville & Nashville Railroad, and the "charge of transportation or conveyance of persons, goods, merchandise and produce" over said Nashville & Decatur Railroad is now, and has been for many years past, far below the maximum rates established by the charters of the original companies united together under the consolidated name of the Nashville & Decatur Railroad Company.

Said railroad, together with other roads owned by complainants, or in which complainants are interested, form a through line from New Orleans, Louisiana, to Louisville, Kentucky, Cincinnati, Ohio, and East St. Louis, Illinois.

XIV.

When the Nashville & Chattanooga and Memphis & Charleston Railroad Companies were chartered, the State of Tennessee occupied an interior position, with no outlets to the markets of the world except those furnished by her navigable rivers; her people, who were principally engaged in agriculture, had but little surplus capital, and the only means of developing a system of internal improvements was by invitation of foreign capital to the State. It was foreseen that in such a sparsely settled country it would be many years after the completion of the roads before they could be expected to be remunerative, and as an inducement to the investment of capital in the construction of railroads, the sections above quoted were inserted in the charters of said companies, prescribing maximum rates of charges for transportation up to which the companies were allowed to charge.

Said companies were among the first railroad companies chartered by the State of Tennessee. Their charters were carefully and elaborately drawn, containing not less than forty sections. Afterwards, under the stimulus of the very liberal State aid offered by the internal improvement system of Tennessee, embodied in an act of the General Assembly passed February 11, 1852, heretofore referred to, a great number of railroad companies were incorporated by the State of Tennessee, and as a matter of convenience to save repetition, the Charter of the Nashville & Chattanooga Railroad Company, and of the Memphis & Charleston Railroad Company, were adopted by the Legislature of Tennessee as models, and many, if not most, of the railroad companies incorporated by the State of Tennessee subsequent to 1845 and 1846 were invested with all the rights, powers and privileges of one or the other of said companies.

It was always understood by all of the departments of the government of the State of Tennessee, that the vesting of one company with the rights, powers and privileges of another, conferred upon the former the right to charge and receive the same tolls and rates of transportation of persons and property as were authorized by the charter of the latter, and no attempt was ever made by the State of Tennessee prior to 1883 to reduce the maximum rates established by the charters above referred to.

If the State of Tennessee had ever intimated that it even claimed the right to reduce the maximum rates fixed by the charters of the Memphis & Ohio and Nashville & Decatur Railroad Companies, neither of them could possibly have raised the money with which its bonds were bought, which were paid to the State in extinguishment of its debt against them.

Complainants would not have consolidated the Memphis & Ohio Company into the Louisville & Nashville, the effect of which was to make the complainants liable

for all the debts of that company. If the State had claimed the right to reduce the maximum rates of the Edgfield & Kentucky and Memphis, Clarksville & Louisville Railroad companies, neither of their roads could possibly have been sold for one-sixth of what they brought at the sales made at the instance of the State under the decrees of the Chancery Court at Nashville, above referred to. The State, however, waited until it had induced complainants and others to advance millions of dollars to enable said companies to pay off their debts to the State, or to purchase the roads at sales made by the State, and then for the first time in her history she assumed the right to reduce the maximum rates established by the charters, and to so regulate them as to greatly impair, if not absolutely destroy, the value of the roads.

On the 4th day of January, 1883, a bill was introduced in the House of Representatives of the State of Tennessee. It was known and labeled House bill No. 8, and was entitled "An act to regulate the operation of railroads in this State so as to prevent extortion and unjust discrimination in the rates charged for the transportation of passengers, freights and cars, and to punish any railroad company, corporation or other person or persons running or operating any railroad in this State, for making such unjust discrimination, or charging more than just and reasonable rates."

It contained twelve sections, and a true copy of it is here filed, marked exhibit "A," and prayed to be taken as part hereof, but it need not be copied unless called for. It passed the House on its third reading on the 22d day of March, 1883, and was transmitted to the Senate.

On the 8th day of February, 1883, a bill was introduced in the Senate of said General Assembly. It was labeled Senate bill No. 178, but was known as the Edmundson bill, and was entitled "A bill to be entitled an act to provide for the regulation of railroad companies and persons operating railroads in this State; to prevent unjust discrimination upon railroads in this State, and to provide for the punishment for the same; and to appoint a railroad commission."

It contained thirty sections, and a true copy of it is here filed, marked exhibit "B," and prayed to be taken as part hereof, but it need not be copied unless called for.

When House bill No. 8 was under consideration upon its third reading in the Senate, the Senate struck out all of it except the caption, and inserted the Senate bill No. 178, or "Edmundson's bill," as an amendment, and in that shape the bill was returned to the House of Representatives. In other words, the Senate rejected every word of House bill No. 8, except the phrase, "Be it enacted by the General Assembly of the State of Tennessee," and then tacked on to that phrase a so-called amendment, a bill which had originated in their own body, and which materially differed from the bill in place of which it was substituted. When the bill returned to the House the so-called Senate amendment was read but one time, and it was moved that the House concur in the Senate amendment, and upon a call of the previous question being sustained, the question recurred on the passage of the bill, when there were only fifty-seven votes in favor and six votes against it.

The bill therefore failed to receive the assent of a majority of all the members to which the House was entitled under the Constitution. Several members entered upon the journal their reasons for voting in favor of the Senate substitute, stating that while it was not as stringent and proscriptive against the railroads as the orig-

inal House bill No. 8, they were willing to vote for it rather than have no legislation at all at that session, and with the hope, as expressed by two members of the House, that "it may lead to further and more effective legislation hereafter, and that the people of Tennessee will yet succeed in their gigantic struggle with the railroad cormorants in interposing the strong arms of the law between them and their grievances."

The fact that the so-called Senate amendment was substantially and radically different from the original House bill No. 8 was conceded by every one.

The Constitution of Tennessee provides, Art. II., sec. 18, that "no bill shall become a law until it shall have been read and passed on three different days in each house, and shall have received on its final passage in each house the assent of a majority of all the members to which that house shall be entitled under this Constitution, and shall have been signed by the respective Speakers in open session."

Section 17 of the same article provides that "bills may originate in either house, but may be amended, altered or rejected by the other."

Complainants insist that the action of the Senate was in no proper sense an alteration or amendment of House bill No. 8, but was in fact a rejection thereof. That the bill, as sent back to the House, was, in substance and effect, a bill which had originated in the Senate, and that it could not become the law until it had been read and passed on three different days in the House of Representatives; whereas the journals of that house show that the bill as returned from the Senate was read but once.

Section 19 of the same article provides that "after a bill has been rejected, no bill containing the same substance shall be passed at the same session." As shown above, when the question recurred upon the passage of the bill, it failed for want of a constitutional majority, and yet afterwards on the same day the bill was again called up and the so-called Senate amendment concurred in.

Section 21 of the same article of the Constitution provides "that the ayes and noes shall be taken in each house upon the final passage of every bill of a general character;" and yet, when the so-called Senate amendment was concurred in, the ayes and noes were not taken in the House. On the contrary, the clever trick was resorted to of calling up the bill by its number and passing it through in the last hours of an expiring session, without stating even its title, and without giving the slightest intimation to the members that such an important measure was being hurried through under the simple designation of "House bill No. 8." There were 824 House bills introduced at that session, and it was of course impossible for the members to recollect the purport of each bill by its number.

Article II., section 18, of the Constitution provides that no bill shall become a law until it shall have been signed by the respective Speakers in open session; and section 21 of the same article provides that the ayes and noes of the members on any question, shall, at the request of any five of them, be entered on the journal.

The Speaker of the House announced that he had signed House bill No. 8, when the roll call showed no quorum present, and six members of the House made a motion that the House should not receive the message of the Speaker announcing the signature of the same, unless there was a House, which meant a quorum, and demanded the ayes and noes upon the same, and they were refused, contrary to Art. II., sec. 21, of the Constitution above quoted, and said members entered their protest to that effect upon the journal of the House.

Complainants insist for the foregoing reasons that said House bill No. 8 was never passed by the General Assembly of the State of Tennessee in the mode required by the Constitution of that State, and is, therefore, not the law of the land. Said bill was, however, approved by the Governor March 30, 1883, and is printed in the pamphlet acts of 1883, as chapter CXCIX.

The title of said act is as follows: "A bill to be entitled an act to provide for the regulation of railroad companies and persons operating railroads in this State; to prevent discrimination upon railroads in this State, and to provide for the punishment for the same; and to appoint a railroad commission."

Article II, section 17, of the Constitution of Tennessee provides that "no bill shall become a law which embraces more than one subject, that subject to be embraced in the title." The first section of the act defines what shall be extortion; the second section provides that a certain penalty may be recovered from any person or corporation guilty of extortion as defined in the act; and yet the subject of extortion is not expressed in the title of the act.

Article II, section 8, of the Constitution of Tennessee provides that "the Legislature shall have no power to suspend any general law for the benefit of any particular individual or individuals, nor to pass any law granting to any individual or individuals, rights, privileges, immunities or exemptions other than such as may be by the same law extended to any member of the community who may be able to bring himself within the provisions of such law."

The act approved March 30, 1883, while it regulates the business of all persons and corporations who use railroads as a means of transporting freight and passengers, and while it subjects such persons or corporations to heavy penalties for extortion and discrimination, it does not interfere in the least with other persons who are engaged in the same business of transporting freight and passengers, but who use boats, wagons or other vehicles as their means of conducting their business. The act is virtually suspended so far as they are concerned, and they are practically granted an immunity or exemption from its operation.

As such persons are not subjected to the heavy penalties denounced by the act, they are left free to discriminate as they please, and in that way at competitive points they can and will deprive complainants of a large amount of valuable business. Complainants insist, therefore, that said act is partial to complainant's rivals in the transportation business, and, therefore, unconstitutional and void.

Section 2 of the act is as follows:

"Be it further enacted, That the party injured may recover of the person or corporation guilty of extortion as defined in this act, ten times the amount of damages sustained by the overcharge or unjust discrimination, as the case may be, and a reasonable fee for the counsel prosecuting the case, in any court having jurisdiction of the amount, in any county where the person or corporation operating the railroad does business; but if it appears that the service in which the extortion was committed was done at rates or upon terms previously approved by the railroad commission hereinafter established, only actual damages and no attorney's fees shall be recovered."

Complainants submit that to allow the injured party to recover ten times as much as he was really damaged is simply taking nine times the amount of actual damage from one private citizen and giving it to another, and violates the Constitution of Tennessee, which prohibits the taking of private property, even for public use, without just compensation.

The act authorized the Governor to appoint three railroad commissioners, who are carefully to consider and revise all tariffs for charges of transportation of any person or corporation owning or operating a railroad in that State, and if, in the judgment of the commission, any such charge is more than just or reasonable compensation for the service for which it is made, or if any such charges amount to unjust and unreasonable discrimination against any person, locality or corporation, the commission shall notify the person or corporation of the changes necessary to reduce the rate of charges to just and reasonable compensation and to avoid unjust and unreasonable discrimination, and in case such change shall not be made, or if any change subsequently made shall not conform thereto, said corporation shall be held *prima facie* guilty of extortion. In other words, the commissioners may arbitrarily order complainants to transport certain freight or passengers at certain rates, and if complainants decline to do so, they are to be subjected to suits by each and every individual injured, to recover ten times the actual damage done, and also to as many suits in behalf of the State to recover penalties of not less than \$300 nor more than \$1,000. All of such suits are to be tried before juries, whom the court will judicially know are generally prejudiced against railroad companies, and in those suits the presumption of innocence which applies to every other defendant in the State is taken away from the companies, and they are to go through the farce of a trial, in which they are virtually condemned before they are arraigned. No other person in the State of Tennessee is subject to any such disadvantage in any legal proceeding in which he may find it necessary to defend his rights. The act, therefore, is not only partial in its operation, but it practically closes the courts to railroad companies, by forcing them to submit to any demands the commissioners may make rather than incur the extraordinary hazard of defending a suit under the oppressive conditions imposed by the act.

For the above and other reasons to be shown upon argument, complainants insist that said act violates the Constitution of the State of Tennessee.

Complainants are advised that said act, approved March 30, 1883, not only violates the Constitution of the State of Tennessee, but also the Constitution of the United States.

Complainants have shown that they have legally acquired all the property, rights, privileges and franchises of the Memphis & Ohio, Memphis, Clarksville & Louisville, and Edgefield & Kentucky Railroad Companies, and that as lessees, they are entitled, during the term of their lease, to operate the Nashville & Decatur Railroad, and to use and enjoy all the rights, privileges and franchises of that company, and of the original companies united or consolidated under that name.

Complainants have also shown that all of said companies were by their charters granted all the rights, powers, privileges and franchises which were granted by the charter of the Nashville & Chattanooga Railroad Company, and the fourteenth section of that charter has been quoted above.

While it is conceded that, in the absence of any contract to the contrary, the State of Tennessee might regulate the rates of railroads within her borders, so far as they relate to internal commerce of that State, yet it was within the power of complainants and of the above mentioned companies, to whose property, rights, privileges and franchises complainants have succeeded, to call upon the State of Tennessee, as they did when their charters or right of way were granted, to fix permanently a limit of maximum charges, and to make it a part of their charters or grant of right of way. If the State had refused to do it, said companies could and

would have abstained from building said roads. But, as the State did agree with complainants and with said other companies to fix permanently a limit of maximum charges, and did make them a part of said charters and grant of right of way, they present contracts secure against subsequent legislative interference. In other words, when the State agreed that complainants and said other companies might charge up to a certain maximum limit, it was in effect an agreement upon the part of the State that such maximum rates should be regarded as reasonable, and that no charges below that maximum should thereafter, so far as those companies were concerned, be regarded as extortionate or unreasonable.

If the Tennessee Legislature of 1883 had the power to declare what should be regarded as reasonable maximum rates to be charged by railroads, surely the Legislatures of 1845-6 and 1851-2 had the same power. And if these Legislatures had the power to declare and agree what should be reasonable rates for two years, they had the right to declare and agree what should be reasonable rates during the existence of the charters referred to. Complainants will now show that said act, approved March 30, 1883, impairs the obligation of the contracts contained in said charters and grant of right of way, by placing it within the power of the Railroad Commissioners appointed thereunder, to reduce complainant's charges far below the maximum limits fixed by said charters and grant of right of way. Unless complainants submit thereto they will be subjected to innumerable suits, in each of which they may be made liable for ten times the damage actually done by them.

The Governor of Tennessee has appointed the defendants, Savage, Gordon and Turley, as "The Railroad Commission of the State of Tennessee," under the 11th section of said act, approved March 30, 1883, and they have entered upon the active discharge of the duties imposed by said act. Complainants are informed, believe and so charge, that said defendants have prepared and printed a "basis by which to revise the tariffs of the various railroads of the State of Tennessee," and they have notified complainants that on December 13, 1883, at Nashville, they will proceed to revise complainant's tariff (since writing the above the complainant's Vice-President having requested an extension of time to enable him to go to New York on important, urgent business, the Secretary, who is also one of the members of the commission, replied that unless the other two members decide to the contrary, a continuance will be granted to December 18, when the commission will proceed to revise complainant's tariff), and they will certainly do so unless restrained by this Honorable Court.

Complainants are informed and so charged that in the basis already prepared by defendants, they have classified freights and fixed certain maximum rates per 100 pounds, per barrel, per ton, and per car load, for distances of five miles and less, from five to ten miles, ten to twenty, twenty to thirty miles, etc., up to six hundred miles.

The maximum rates proposed to be allowed by said basis are in most instances below the maximum rates which the State of Tennessee agreed might be charged upon the roads now owned or leased by complainants referred to above, and complainants charge that said defendants intend on December 13 or 18, 1883, unless restrained by this Honorable Court, to conform substantially to said basis, and to reduce most, if not all complainant's rates below the maximum rates which complainants have the right to charge, and materially below the tariff rates which complainants now charge, which are already below the contract maximum.

The tariff rates now charged by complainants are not only below the contract maximum, but they are, in fact and truth, just and reasonable, there is no unjust

or unlawful discrimination in them, and they have given general satisfaction to the public. The country tributary to complainant's system of roads has been fostered and developed by every means in complainant's power. To-day it enjoys a commercial and industrial prosperity unsurpassed anywhere in the Union, and complainants can truthfully say without vanity that this prosperity is largely due to the liberal aid and encouragement which complainants have given to manufacturing, mining and other industrial enterprises along the line of the road. The rates charged by complainants are so low that they have not been able to pay their stockholders one cent of dividends for nearly two years past, and it has been only by the most rigid economy that they have been able to meet the interest on their bonded debt. If complainants are forced to submit to the reduction in rates which defendants will order, complainants will lose hundreds of thousands of dollars annually, and they will be placed in serious danger of being unable to meet their just liabilities. If complainants refuse to submit to the threatened reduction, they will be subjected to hundreds and perhaps thousands of suits in the twenty different counties of Tennessee through which their roads run.

Complainants submit that said act, approved March 30, 1883, violates not only Article I., section 10, of the Constitution of the United States, which ordains that no State shall pass any law which impairs the obligation of contracts, but it also violates section 8 of said article, which ordains that Congress shall have power to regulate commerce with foreign nations and among the several States. As shown above, the roads owned or leased by complainants in Tennessee are operated in connection with roads in other States, and are constantly engaged in the transportation of passengers and merchandise from places in foreign countries and other States to places in Tennessee, and from places in that State to places in foreign countries and other States, and from from places in foreign countries and other States through and across that State to places in foreign countries and other States.

In a word, all of said roads are constantly and extensively engaged in "commerce with foreign nations and among the several States." It is true that said roads are also engaged to some extent in commerce between different points wholly within the State of Tennessee, but such commerce bears an inconsiderable proportion to the foreign and inter-State transportation done by complainants over said roads.

The said act approved March 30, 1883, by its terms seems to apply as well to tariffs of charges for transportation of commerce with foreign nations and among the several States as to tariffs of charges for transportation between different points wholly within the State of Tennessee. As the basis prepared by defendants upon which to revise the tariff of the various railroads in said State suggests certain rates for distances from 590 to 600 miles, and as there is no line of railroad which has 600 miles of track in Tennessee, complainants believe and so charge that defendants intend in their threatened revision of complainant's tariff to fix or limit complainant's charges for transportation from places in Tennessee to places in foreign countries and in other States, and from points in foreign countries and other States to points in or beyond the State of Tennessee.

Complainants further show that they own, lease or have a majority of stock in a system of roads extending from Cincinnati, Ohio, via Louisville, Kentucky, Nashville, Tennessee, Montgomery and Mobile, Alabama, to New Orleans, Louisiana. Another line of complainant's road extends from East St. Louis, Illinois, via Evansville, Indiana, to Nashville, Tennessee; and still another line of

of their road extends from Bowling Green, Kentucky, to Memphis, Tennessee. All of those cities except Bowling Green are important commercial centers. They are principally engaged in collecting together and distributing or exporting the various products, agricultural, mineral and mechanical, of the Mississippi valley. Neither of those cities relies for its commerce upon the products of its own State. All of them reach out into other States for business, and the free and enlightened competition which has existed between them has quickened the enterprise of all of them. Each one of them is reached by railroads and water routes, which are in active competition with complainants, and many of them are reached by several other railroads, which are in competition, not only with complainants, but also with each other. This competition has reduced the rates of transportation to and from said cities below the rates which obtain in Europe for corresponding service; below the rates which most of the railroad companies are authorized to charge by their charters; and, as stated above, it has reduced complainant's rates so low that they have not been able to pay a dividend for nearly two years past. There is a considerable quantity of cotton raised in Tennessee, a very small per cent. of which is consumed in that State. It is collected at points like Nashville, Memphis, Louisville, Cincinnati, St. Louis and New Orleans, and thence forwarded to the mills in New England, or exported to Europe via New Orleans or the Eastern cities. From the time it leaves the gin in Tennessee it becomes "a commodity destined for other States and for foreign countries," and "has begun to move as an article of trade from one State to another." The competition between the various cities named above and between the various transportation routes operating in or across the State of Tennessee, has not only reduced the rates on cotton to those cities to a point below what is reasonable compensation to the carrier, but in order to maintain a fair balance of power and trade between those cities, certain relative rates obtain between them so equitably adjusted as to enable one of them to compete with the other, and in order to maintain that equilibrium, if a reduction is made in favor of any one of them it will secure a practical monopoly of the competitive commerce unless corresponding reductions are at the same time made in favor of each of the other cities. The defendants, well knowing that the rates which now obtain on cotton from points in West Tennessee to New Orleans are as low as the actual cost of service will permit, have requested complainants and the other railroad companies operating roads in West Tennessee, to reduce the rates which at present obtain on cotton between points in West Tennessee and Memphis. If this request is granted, the rates which now obtain from these points to New Orleans must also be reduced in the same proportion, or most of the cotton raised in West Tennessee will go to Memphis, and New Orleans will be deprived of all opportunity to compete with Memphis in that commerce. And as the New Orleans rates are now as low as it is possible for the carriers to make them without operating at a positive loss, the effect will be to give Memphis a monopoly of most of the cotton raised in West Tennessee. If the Railroad Commissioners of Tennessee may thus favor a city of their own State, so may the commissioners of other States favor their cities. Each State will monopolize the commerce in all articles produced within its limits, notwithstanding many of such articles may have been produced or raised for the express purpose of shipping them to other States, or of exporting them to foreign countries. Whatever may be the power of Tennessee to regulate the rates of transportation between different points in her own territory, upon articles intended to be used or consumed within her own borders, yet she has no power to regulate the rates even

between different points in her own territory upon cotton, tobacco and other commodities which are originally destined for other States, and which, when they begin to move at all, move not as a local article, but as an article of trade from one State to another State, or to foreign countries.

The premises considered, complainants pray that the said John H. Savage, Geo. W. Gordon and John A. Turley be made defendants hereto, and be required by subpoena to appear and answer this bill according to the course of this Honorable Court, and for that purpose may the writ of subpoena issue, etc., commanding, etc.

That it be decreed and declared that said act of the Legislature of Tennessee, approved March 30, 1883, for the reasons above assigned, was not passed in the mode required by the Constitution of the State of Tennessee, and that in its provisions it violates said Constitution, and is, therefore, null and void; that, until the further order of the court in this cause, said defendants be enjoined from taking any action whatever against or in relation to complainants under said act. But if the court should not think that said act was void for all purposes, then complainants pray that it be decreed and declared that said act violates the Constitution of the United States, in this, that it impairs the obligation of the contracts contained in the act of the General Assembly of Tennessee granting complainants the right of way into Tennessee, and in the acts granting charters to the Memphis & Ohio, Memphis, Clarksville & Louisville, Edgefield & Kentucky, and Nashville & Decatur Railroad Companies; and that said defendants be enjoined until the further order of the court in this cause from revising complainant's tariff of rates upon their main stem, extending from Louisville to Nashville, for the transportation of either freight or passengers, so as to reduce them or any of them below the maximum limits fixed by the act passed by the Legislature of Tennessee granting complainants the right of way into said State; also, from revising complainant's tariff of rates upon the roads which formerly belonged to the Memphis & Ohio, the Memphis, Clarksville & Louisville, the Edgefield & Kentucky, and the Nashville & Decatur Railroad Companies, so as to reduce them or any of them below the maximum limits fixed for said roads by their charters. If the court should not think that said act impairs the obligation of said contracts, then complainants pray that the court decree and declare that said act violates the Constitution of the United States in so far as it seeks to authorize said defendants to regulate the rates of transportation upon cotton, tobacco, and other articles, which, though passing from point to point in Tennessee, are in fact articles of trade destined for other States or foreign countries, and that said defendants be enjoined until the further order of this court from revising complainant's tariff of charges upon any such articles of trade. If the court should not think that the transportation of such articles of trade as have just been mentioned is inter-State commerce until such articles may be actually *en route* out of, into or across the State, then complainants pray that it be decreed and declared by the court that said act approved March 30, 1883, in so far as it attempts to authorize defendants to regulate the rates of transportation of passengers or freight from points in Tennessee to points without, or from points without to points within, or from points without through or across the State of Tennessee, violates the Constitution of the United States, and that said defendants be enjoined until the further order of this court, from revising complainant's tariff of charges upon such passengers or freight; that said defendants be enjoined from bringing or prosecuting, and from aiding in the bringing or prosecuting of any suit or suits against complainant to reduce their charges to conform to such revisions of their tariffs as said de-

defendants may make; that said injunction be made perpetual upon final hearing, and, as irreparable injury to complainants may ensue if defendants should revise complainant's tariff before the motion for a preliminary injunction can be heard, complainants pray that, until said motion can be heard, an order be granted restraining defendants from doing the acts herein sought to be enjoined.

Complainants pray for all such other and further relief as in equity they may be entitled to.

This is the first application for injunction in this case.

ED. BAXTER,

Solicitor for Louisville & Nashville Railroad Company.

STATE OF _____, }
COUNTY OF _____, }

Personally appeared before me, Ed. Baxter, Solicitor of the Louisville & Nashville Railroad Company, the above named complainants, and made oath in due form of law that the facts stated in the foregoing bill as of complainant's own knowledge are true, and those stated as upon information of others he believes to be true.

ED. BAXTER.

Sworn to and subscribed before me, on the 12th of December, 1883.

JOHN BAXTER, *U. S. Circuit Judge.*

To the Clerk of the Circuit Court of the United States for the Middle District of Tennessee, at Nashville:

Notify the defendants that the motion for an injunction, as prayed for in the bill, will be heard before me at the United States Court-room, at Nashville, Tennessee, on Friday, the 11th day of January, 1884, at 10 o'clock A. M., or as soon thereafter as it can be heard, and issue an order restraining the defendants from taking any action whatever against or in relation to complainants, under an act of the General Assembly of the State of Tennessee, approved March 30, 1883, entitled "a bill to be entitled an act to provide for the regulation of railroad companies and persons operating railroads in this State, and to prevent discrimination upon railroads in this State, and to provide for the punishment of the same, and to appoint a railroad commission," also restraining said defendants from bringing or prosecuting, or aiding in bringing or prosecuting, any suit or suits against complainants for refusal by complainants to reduce their charges to conform to such revision of their tariffs as said defendants may make; said restraining order to remain in force until said motion for an injunction can be heard and disposed of.

Given under my hand at Columbus, Ohio, this 12th day of December, 1883.

JNO. BAXTER, *U. S. Circuit Judge, etc.*

Middle District of Tennessee:

I, Lewis T. Baxter, Clerk of the Circuit Court of the United States for the District aforesaid, do hereby certify that the foregoing is a true, perfect and complete copy of the bill and fiat in case No. 2,657, of Louisville & Nashville Railroad Company vs. Jno. H. Savage and others, in this Court.

Witness my hand and the seal of said Court, this 15th day of
December, 1883.

[SEAL.]

LEWIS T. BAXTER, *Clerk.*

AMENDED BILL.

THE LOUISVILLE & NASHVILLE RAILROAD COMPANY

vs.

JOHN H. SAVAGE *et als.*

To the Honorable Judges of the Circuit Court of the United States for the Middle District of Tennessee:

Complainants respectfully represent unto your Honors that heretofore, on the 13th day of December, 1883, it filed its original bill in this Court in Equity, it being No. 2657 on the Equity side of the docket, alleging, among other things, that it was chartered by the State of Kentucky, and afterwards given the right of way by the State of Tennessee, to construct and operate a railroad from the city of Louisville, in the State of Kentucky, to the city of Nashville, in the State of Tennessee, and to carry freight and passengers at the rates fixed by said charter; and that for many years it has been operating said railroad, together with other lines of railroad in Tennessee, Kentucky, Alabama and other States, subsequently purchased by complainant—under said charter and the amendments made by the State of Kentucky, and certain legislative rights granted by the Legislature of Tennessee—carrying freight and persons, and generally engaged in inter-State commerce; and further, that under an act of the State of Tennessee, approved March 30, 1883, a railroad commission which was about to carry out the provisions of said act, and regulate the charges of complainant for transportation; and that the said act was void and unconstitutional, for many reasons set out in said original bill.

And now, by way of amendment thereto, by special leave of the court first had and obtained, complainant respectfully represents unto your Honors that said act of March 30, 1883, is further unconstitutional and void because it violates the 8th. section of Art. I., of the Constitution of the United States, and also the 14th amendment of said Constitution; it denies to complainant the equal protection of the laws, and seeks to deprive it of its property without due process of law, in that said act gives a penalty to the State of Tennessee for a violation of its provisions against said corporations which operate railroads in Tennessee, but it declares no such penalty against a natural person or persons who may operate railroads in Tennessee under the same circumstances for the same offense in every respect precisely. And complainant further shows the said act also violates said 14th amendment of said Constitution, because in all suits to be brought under the provisions of said act the rates fixed by said railroad commission are to be taken as *prima facie* just and reasonable, and a violation of said rates is to be held *prima facie* evidence of extortion in case the defendant is a railroad corporation, but no such force and effect is to be given to the charges so fixed by said commissioners

if the person is a natural person. And complainant further shows that said act violates article 2, section 3, of the Constitution of the State of Tennessee, in that it authorizes the commission to perform a legislative act, the said bill not being within itself a complete legislative enactment. And complainant further shows that it violates article 1, section 16, and article 1, section 10, of said State Constitution, in that it seeks to enforce excessive fines and puts complainant twice in jeopardy for the same offense. And complainant further shows that said act violates said State Constitution in the 8th section of the 11th article, in that it does not apply to all persons of the same class to which complainant belongs; neither to all common carriers, nor to all railroads, nor to all railroad companies; it only applies to railroads from the general class of common carriers by all of its provisions, to railroads now in existence by the 29th section of the act, and to railroad corporations and not to railroads when operated by individuals or co-partnerships, as provided by the 3d section of the act.

And complainant further shows that said act violates in its 13th section the following clauses of said State Constitution: art. 1, section 6; art. 6, section 14; art. 1, section 8, in this, that it violates the right of trial by jury, and deprives complainant, a railroad corporation, of its property without the due process which is given to all other citizens of the State, even to the individual owners of railroads.

Complainant prays for all process and relief asked for in the original bill, and that defendants may answer, &c., as therein required.

ED. BAXTER,
DICKINSON & FRAZER,
SMITH & ALLISON,

Solicitors.

Andrew Allison, attorney and agent for the Louisville & Nashville Railroad Company, makes oath that the statements of the following bill are true to the best of his knowledge, information and belief.

ANDREW ALLISON.

Sworn to and subscribed before me, on the 15th of January, 1884.

LEWIS T. BAXTER, *Clerk.*

Middle District of Tennessee:

I, Lewis T. Baxter, Clerk of the Circuit Court of the United States, for the District aforesaid, do hereby certify that the foregoing is a true and perfect copy of the second amended bill filed in cause No. 2,657, of Louisville & Nashville Railroad Company vs. Jno. H. Savage and others, in this Court.

Witness my hand and the seal of said Court, at Nashville, this

[SEAL]

15th day of January.

LEWIS T. BAXTER, *Clerk.*

JUDGE BAXTER'S OPINION.

THE LOUISVILLE & NASHVILLE RAILROAD COMPANY

vs.

THE RAILROAD COMMISSION OF TENNESSEE,

AND THE

EAST TENNESSEE, VIRGINIA & GEORGIA RAILROAD COMPANY

vs.

THE RAILROAD COMMISSION OF TENNESSEE.

The complainant claims to be a corporation and a citizen of Kentucky, and the defendants are the "Railroad Commission," appointed under and pursuant to the act of March 30, 1883. The provisions of this act, so far as they are material, will be recited in the progress of this opinion. It is enough for the present to say that it purports to vest the defendants with general supervision of all the railroads and railroad operations in Tennessee. The complainant, who owns and operates several railroads in the State, contends, first, that said act was not passed in the manner prescribed and according to the formalities required by the Constitution, or if it was, it was not passed in the form in which it has been promulgated; and secondly, if constitutionally enacted, it is repugnant to the State and Federal Constitutions, and therefore void and inoperative. It furthermore complains that the defendants are about to enforce the same to its great detriment and irreparable injury, and prays for an injunction to restrain the defendants from interfering, under the color thereof, with its property or business.

Per contra, the defendants insist that the act was regularly passed as promulgated, and that it is, in all of its provisions, within the constitutional prerogatives of the General Assembly, and a valid enactment; and that the enforcement thereof by them, will be no legal wrong of which the complainant has any right to complain.

Our duty, therefore, is to inquire and determine whether there is any irreconcilable repugnance between the act and the State or Federal Constitutions. Its first declaration is that all railroads in the State are public highways, over which all persons have equal rights of transportation for their persons and freight, on the payment of a just and reasonable compensation therefor. To this we fully assent. Railroads have been created mainly for the accommodation of the public and to facilitate the business of the country. They are indispensable to the rapid and cheap transportation of commercial commodities. Under the fostering care and protection hitherto extended to them, they have expanded into huge proportions. With the beginning of this year we had 125,000 miles of road, representing more than \$5,000,000,000 of capital, giving employment to 500,000 people, and in the

annual receipt of more than \$800,000,000 of earnings. They permeate every part of this extended country, and in a large measure monopolize the entire inland carrying business. Everybody, from the very exigencies of business, is compelled to patronize them. In this regard, business men are left without any option. If unrestrained by wholesome legislation, the public would be very much at their mercy. They could, by unjust discriminations, made under the name of drawbacks, rebates, or other disingenuous pretences, favor friends and oppress opponents, and so adjust and graduate their rates according to the exigencies of fluctuating markets, as to secure to themselves, or those who operate them, an undue proportion of advancing prices. It would, therefore, in view of these obvious possibilities, be a humiliating confession to admit that there was no reserved power, either in the Court or Legislature to protect the public against such possible abuses. We do not hesitate to affirm the existence of such a power. Every owner of property, however absolute and unqualified his title, holds it subject to the implied liability that the use thereof shall not be injurious to the public. Rights of property, like social and conventional rights, are held subject to such reasonable limitations in regard to their enjoyment as shall prevent them from being injurious to the rights of others, and to such reasonable restraints and regulations, to be established by law, as the Legislature may from time to time ordain and establish. It is, in this principle, applicable alike to all kinds of property, generally denominated the "*police power*" of the State, that the authority is found for such control over individuals and corporations, and over their property, as is necessary to insure safety to all, and promote the public convenience and welfare. And in the exercise of this reserved authority, the Legislature may require railroad corporations and persons operating railroads in the State to observe precautionary measures against accident, forbid unjust discrimination and extortionate charges, and, where there is no valid contract to the contrary, prescribe a reasonable maximum of charges for the services to be performed by them, and enforce the same by appropriate pains and penalties. There are many other things that may be lawfully exacted of them, which need not be recapitulated here. The Legislature, however, cannot, under the pretense of regulation, deprive a corporation of any of its essential rights and privileges. In other words, the rules prescribed and the power exerted must be within the *police power* in fact, and not covert amendments to their charters in curtailment of their corporate franchises. Nor can the Legislature, in the exercise of this power, make any regulation in contravention of the State or National Constitutions. Every statute which invades vested rights, inflicts punishment, or takes private property otherwise than by due process of law, impairs the obligation of valid contracts, or denies to any one or more persons the equal protection of the law, are unconstitutional and invalid. Does the act in question violate any of these principles? As we have seen, it assumes to vest the defendants with a general supervision of all railroads and railroad operations in the State, and makes it their duty to "consider and carefully revise the tariffs of charges for transportation," etc., and if, in their judgment, the rate charged by them "is more than a just and reasonable compensation" for the service to be performed, or if such such rate "amounts to unjust and unreasonable discrimination" against any person, locality or corporation, they are to notify said corporations, etc., of the changes necessary to reduce the rate to "a just and reasonable compensation," and to "avoid unjust and unreasonable discrimination," and "when such changes are made or deemed unnecessary," said commissioners are commanded to append a

certificate of approval to the schedule of charges so authorized by them, and the rates thus fixed, approved and certified, shall be *prima facie* evidence of the reasonableness and justice of the same; but they are nevertheless subject to revision by juries, as will be hereinafter shown.

The act does not, in express terms, command railroad carriers to adopt the rates prescribed by the commissioners, but provides that if they shall "exact and receive" more than "a just and reasonable compensation," or "demand more than the rates specified in any bill of lading" issued by them respectively, or shall, for their "advantage, or for the advantage of any connecting line," or of "any person or locality;" or if such railroad corporation makes any "unjust or unreasonable discrimination," etc., (unless in the fulfillment of an existing contract, or some contract to be thereafter made for the purpose of developing some industrial enterprise), it shall be held *prima facie* guilty of the crime of extortion, as defined by the act, and subjected to the pains and penalties therein imposed; and every "injured" party is authorized to sue for each extortionate charge, and recover "ten times the amount of the damages sustained," and a reasonable fee for his counsel, unless it shall appear that the alleged extortionate charge conformed to the rates fixed by the commission, in which contingency (if the jury shall entertain the opinion that the rates so fixed are too high or amount to an unjust and unreasonable discrimination), they are required to find for the plaintiff, but only for his actual damages, excluding the fee to counsel.

Furthermore, the commissioners themselves are not bound by the rates prescribed by them. On the contrary, they are charged with the duty of "investigating" and "determining" whether any of the provisions of said act are violated, and whenever satisfied that violations thereof have occurred, notwithstanding the corporation may have charged the rates fixed and authorized by them, they are peremptorily commanded by the statute to bring suits for every such violation against the offender, in the name and for the benefit of the State; and if, upon the trial, the jury shall believe from the testimony adduced, that the charges are "unjust and unreasonable," or that they "amount to unjust and unreasonable discrimination," their verdict must be for the State, and they are required to assess and return therewith a penalty of not less than \$100 nor more than \$1000, and the court shall render judgment therefor.

The complainant insists that the act is too indefinite to sustain a suit for the penalties therein imposed, the offenses for which said penalties are to be inflicted not being sufficiently defined. The definition of the true principles of these offenses is, first, the taking of "unjust and unreasonable compensation," and, secondly, the making of "unjust and unreasonable discriminations." But what is unjust and unreasonable compensation, and unjust and unreasonable discrimination? And can an action *quasi* criminal be predicated thereon? It was expressly held to the contrary in the case of *Cowan, McClung & Co. v. the East Tennessee, Virginia & Georgia Railroad Co.*, decided a few years since at Knoxville (but not reported), because, as the learned Judge said, "it would have to be left to a jury, upon the proof, to say whether the difference" in the rates "was discrimination or not," and that the same difference "might in one instance be held a violation of the law, and in another not," thus making the guilt or innocence of the accused dependent upon the finding of the jury, and not upon a construction of the act. "This," he said, "I think cannot be done."

If this decision is authoritative, it is conclusive of this part of this case. We

think the decision clearly right. Questions as to what is a reasonable time for the performance of contract, or reasonable compensation for work and labor done by one man at the request of another, without any stipulation as to the price to be paid, and other like cases, frequently arise in civil controversies. But the law furnishes, in all such cases, a *standard* of compensation for the guidance of the jury. Without such legal standard, there could be no reasonable approximation to uniform results; the verdicts of juries would be as variant as their prejudices, and this could not be tolerated. To thus relegate the administration of the law to the unrestrained discretion of the jury; to thus authorize them to determine the *measure* of damages, and then assess the amount to which a plaintiff may be entitled, would inevitably lead to inequities and to injustice. Hence the statute under consideration undertakes to supply this desideratum by which juries are to be governed in the determination of the questions submitted to them. That standard is "that no rates or charges for services in the transportation of freight over any railroad, shall be held or considered extortionate or excessive under any proceeding under this act if it appears from the evidence that the net earnings from its passenger and other traffic would not amount to more than a *fair and just return* on the value of which such railroad, with its appurtenances and equipments, *to be assessed for taxation.*"

This definition is somewhat obscure. But however interpreted, it does not obviate the objection made or mitigate its force, but intensifies pre-existing doubts. The value is to be the amount at which the road, its appurtenances and equipments are "*to be assessed for taxation.*" But what assessment is to govern? the one made before or after the alleged overcharge or prohibited discrimination? The language of the act is "*to be assessed.*" But we will not tarry here. Suppose the value satisfactorily ascertained, how and upon what basis are the net earnings to be computed? Is the estimate to be based on past receipts, current income or anticipated earnings? Is the accused corporation to be held to anticipate its future operations, foresee the amount of its receipts and expenditures and accurately foreknow its future profits and losses, so as to be able to strike a balance in advance of actual results in order to make its charges conform to the requirements of the statute? If so how far in the future must their foreknowledge extend? These are some of the many difficulties with which railroad companies are to be embarrassed and against which the act requires them to provide. But we will suppose these to have been successfully surmounted, and another and more obstinate problem remains. There corporations are in addition to their expenses, allowed to charge at a rate that will insure a "*fair and just return*" on the value of their property. But what is a fair and just return? This vital question is by the act left to the unqualified and unrestrained discretion of the jury. There is no legal standard erected whereby the jury can measure the amount. One jury may fix it at 2 or 3 per cent. per annum, while another jury may, in view of business contingencies and fluctuating values, allow 6, 8 or 10 per cent., and their action would be so far conclusive as to be beyond the revision of any reviewing court. The facts that the jury are to ascertain are first, the *net* earnings; and, secondly, what would be a "*fair and just return.*" The ascertainment of net earnings involves necessarily an inquiry into the gross receipts and expenditures. May the jury revise the expense account, and, if so, to what extent? Both the earnings and expenses vary in accordance with the exigencies of business. Are rates to be varied in accordance with the fluctuating fortunes of railroad opera-

tions? If so, a charge reasonable in itself, and honestly made, might be rendered extortionate, and hence criminal, by a reduction of expenses or an unexpected increase of business, or a charge honestly made on the supposition that five or six per cent. would be fair and just, might be converted into a crime by the verdict of the jury subsequently rendered, based, it may be, upon facts transpiring subsequent to the alleged violation of the law.

We think the property of the citizen—and a railroad corporation is, in legal contemplation, a citizen—cannot be thus imperiled by such vague, uncertain and indefinite enactment. The corporations and persons against whom this act is directed, can do nothing under it with reasonable safety. They may take counsel of the commission, act upon their advice, and honestly endeavor to conform to the statute. But if a jury, before whom they may be subsequently arraigned, shall, in their judgment, and upon such arbitrary basis as they are at liberty to adopt, conclude that the commissioners misadvised, or that the managers of the accused railroad corporation made a mistake in regulating their charges upon a five per cent. instead of a four per cent. basis, the honesty and good faith of the accused will go for nothing, and penalty upon penalty may be added until the defendants' property shall be gradually transferred to the public. This cannot be permitted. Penalties cannot be thus inflicted at the discretion of a jury. Before the property of a citizen, natural or corporate, can be thus confiscated, the crime for which the penalty is inflicted must be defined by the law-making power. The Legislature cannot delegate this power to a jury. If it can declare it a criminal act for a railroad corporation to take more than a "fair and just return" on its investments, it must, in order to the validity of the law, define with reasonable certainty what would constitute such "fair and just return." The act under review does not do this, but leaves it to the jury to supply the omission. No railroad company can possibly anticipate what view a jury may take of the matter, and hence cannot know in advance of a verdict whether its charges are lawful or unlawful. One jury may convict for a charge made on a basis of four per cent., whilst another might acquit an accused who had demanded and received at the rate of six per cent., rendering the statute, in its practical working, as unequal and unjust in its operations as it is indefinite in its terms. No citizen under the protection of this court can be constitutionally subjected to penalties, and despoiled of his property, in a criminal, or *quasi* criminal, proceeding, under and by force of such indefinite legislation.

The act furthermore conflicts with the eighth section of the eleventh article of the State Constitution and the fourteenth amendment to the Constitution of the United States. The first of these provides that "the Legislature shall have no power to suspend any general law for the benefit of any particular individual, nor to pass any law for the benefit of individuals inconsistent with the general laws of the land; nor to pass any law granting to any individual or individuals rights, privileges, immunities, or exemptions, other than such as may be, by the same law, extended to every member of the community who may be able to bring himself within the provisions of such law;" and the last—the Fourteenth amendment—prohibits the States from "depriving any person of life, liberty or property without due process of law, or denying to any person within their jurisdiction the equal protection of the law." It is not necessary for us to undertake, in this case, to define the boundaries or limit the operation of these just constitutional restrictions upon legislative authority. Their general object is to secure to all citizens in like circum-

stances, an equality of legal rights, and to protect minorities and other interests not strong enough to protect themselves against the aggressions of the majority; to restrain all injurious legislative discrimination against persons and property; to compel an equal distribution of the burdens of government upon every citizen, natural or corporate, coming fairly within the purview of the law, and to give to every one an equal right to invoke the remedies prescribed by law for the redress of wrongs done, either to his person, reputation or property. Such, we say, is the general purpose and intent of these constitutional provisions. The accuracy of this interpretation is not, as we understand, questioned by the defendants. Their contention is, that railroad property is, in many respects, peculiar in its characteristics and uses, requiring legislation peculiarly adapted to them, and that to so legislate is not within the prohibitions of the foregoing constitutional guarantees, as, for instance, the enactment of a statute to regulate the running of trains by railroads. We admit the contention that it is competent for the Legislature to enact laws for the government and regulation of railroads, and that the same could not be rendered invalid because of their non-applicability to other and dissimilar properties. But it does not follow that the Legislature can enact statutes applicable as well to other kinds of property as to railroads, and therein discriminate so as to impose heavier burdens on one than are imposed on the other. Certainly they cannot so distinguish as between different railroad companies or between railroad corporations and persons operating railroads on competition with them. Nevertheless, the act in question, if valid, has made this discrimination in the most direct and positive terms. Although it professes to provide for the regulation of railroad companies and persons operating railroads in this State, and although both are common carriers by rail, use the same kind of machinery and motive power, are under equal obligations to the public and to their patrons and compete in business, railroad corporations are thereby burdened with pains and penalties not imposed on persons operating railroads in competition with them. By the first section of the act both are declared amenable to "injured parties" for the causes therein enumerated. But the third section prescribing penalties in favor of the State, as hereinbefore stated, for charges made in excess of what a jury may subsequently find in manner aforesaid and upon the basis stated, to be more than just and reasonable compensation, or unjust and unreasonable discrimination, is expressly confined to corporations. Under this section, corporations are subject to be sued, harassed and worried by expensive and ruinous litigation, and to the payment of the the penalties and costs therein provided; while persons operating railroads in active competition with them, engaged in the same kind of *quasi* public service and under the same obligations of fidelity and diligence, are exempt therefrom.

Another and like invidious discrimination is contained in section thirteen. This section makes it the duty of the Commissioners to "consider and carefully revise all the tariffs of charges for transportation of any person or corporation owning or operating a railroad in this State," and if, in their judgment, "any such charge is more than just and reasonable compensation for the service for which it is proposed to be made; or if any such charge amounts to unjust and unreasonable discrimination against any person, locality or corporation," the Commissioners are to "notify the person or corporation of the changes necessary to reduce the rate to a just and reasonable compensation, and to avoid an unjust and unreasonable discrimination;" and "when such changes are made," or "when none are deemed proper and expedient, the Commissioners are to append a certificate of approval to such tariff of

charges, and in case such change" suggested by the Commission "shall not be made," or if "any change subsequently made shall not conform thereto," said "corporation shall be held *prima facie* guilty of extortion." It is corporations, and not persons operating railroads, who are to be held *prima facie* guilty of extortion under this section, and it is corporations, and corporations *only*, who can be punished under its provisions, and thus it appears the act is, in its severest features, more exacting and oppressive of corporations, than of persons operating railroads, the former being subjected to penalties and to punishment from which the latter are exempt.

But the unconstitutional discrimination of this act is not confined to discrimination between railroad corporations and persons operating railroads, but extends to a discrimination between railroad corporations themselves, the twenty-ninth section thereof expressly declaring that "none of its provisions" shall apply to any railroad then being "constructed," or which might thereafter be "begun and constructed in the State," until "ten years from and after its completion." Wherefore this distinction between existing roads and roads to be thereafter built? If the act was a proper regulation, why not apply it to roads to be hereafter built? If the Legislature can thus draw the line between different railroads before the date at which they were or are constructed, where and at what point is legislative discrimination to cease? If the Legislature can thus discriminate between new and old roads it can assume any other arbitrary basis in support of invidious legislation, and in this way oppress one interest for the benefit of another; and if it can do this, the foregoing wise and just provisions of the State and National Constitutions, intended to secure an equality of rights to every citizen, may as well be eliminated from those sacred instruments.

Notwithstanding the act under consideration professes to regulate railroad operations, it, in effect, places the business of all railroad corporations in the State under defendants' supervision and control. In addition to the authority to revise their tariffs of charges, as hereinbefore shown, the Commissioners may, for undisclosed reasons and without accountability to any one, give better rates to one corporation than to another. And (sec. 17) whenever in their judgment "it shall appear that repairs are necessary," or that "additional rolling stock" is needed, or "any change of stations or station-houses," or "any change in rates" are desirable, or "change in the mode of operating any road and conducting its business is reasonable or expedient," the Commissioners "shall give information in writing" to the corporation of the "improvements and changes which they may adjudge proper," etc. These powers, in addition to the authority to prescribe rates, include all the incidents pertaining to the absolute ownership of property. In the exercise of them, the commission can limit receipts and dictate expenditures, insure prosperity to one company and drive another into bankruptcy, and assume the management and control of the business and operations of every railroad corporation in the State.

But the defendants say that their revisions of tariff rates and suggestions in regard to the methods of conducting business are not obligatory on the railroad corporations; that the statute is advisory and not mandatory in its terms. This is true. Upon the face of it, the railroad companies are left to adopt or reject the rates fixed and ignore the suggestions made by the Commissioners. But if they decline to conform to the rates fixed by the Commissioners, they do so at the peril of subjecting themselves to a multiplicity of suits by the State and by individuals, to be tried by juries interested in the reduction of charges, and upon the anomalous

principles declared by the act, which, by force of the *prima facie* effect therein given to the *ex parte* action of the Commissioners, reverses the presumption of innocence hitherto accorded to all defendants in criminal or *quasi* criminal proceedings, and casts the burden of exculpation on the accused. That such litigation will follow is not at all problematical; it is certain. The authors of this statute have been careful to place this beyond doubt. It is therein made the imperative duty of the Commissioners, in the event any railroad company refuses to adopt the rates to be prescribed by them, to institute and prosecute a suit, as hereinbefore stated, for every overcharge; and the juries called to try them, will, by the express command of the statute, be compelled to find against the defendants and assess the penalties imposed, unless defendants establish by affirmative proof that its *future* net earnings on the arbitrary basis declared by the act, will not exceed a fair and just return on the value of its property to be assessed for taxation—the jury being the exclusive judges of what a fair and just return is. This much is expressly commanded. But “injured parties” are left to the exercise of their own discretion whether they will sue or not. Nevertheless, by way of inducement, the *prima facie* effect given by the act to the judgment of the Commissioners, supplies them with the requisite proof to sustain their actions, and, as an additional encouragement, the act offers *ten times* the amount of the damages sustained and a reasonable attorney’s fee to be paid by the railroad company. No railroad company in the State can successfully cope with the litigation that will inevitably follow a refusal by it to conform to the requirements of the Commissioners in the particular mentioned. Through the indefinite terms of the statute, severity and multiplicity of its penalties, the impossibility of determining in advance of the verdict of a jury in the particular case, what is and what is not a violation of its provisions, the power conferred or attempted to be conferred on juries to define the offense and then inflict punishment coupled with the *ex post facto* effect given to their verdict involves everything in uncertainty and commits every railroad corporation in the State to the mercy of the Commission. By the slow but certain operation of this statute, the Commission can, if they want to, gradually take and appropriate all the railroad property in the State to the public use, without that just compensation provided for by the Constitution. In a word, the Commission, under the terms of this act, hold, in so far as railroad corporations are concerned, the issue of life and death as in the hollow of their hands. Of what avail then is the suggestion that the powers of the Commission are only advisory? To whom and in relation to what is their advice to be given? They speak to the owners of \$50,000,000 of railroad property; and although they may speak in the most deferential language, the companies to whom their gentle admonitions are to be addressed, thoroughly understand and justly appreciate the unlimited authority with which they are clothed by the act, the uncertainties ahead, the dangers with which they are environed, and the ruinous litigation to which they will be exposed, if they decline to adopt the suggestions made, and they will, therefore, with a lively sense of their utter helplessness, cravenly submit to the will of the Commission, although such submission may remotely involve the company in hopeless insolvency. Like apprehension would continue them the ready and flexible tools of the power placed over them, and the expressed wishes of the Commission would, in every instance, be accepted and acted upon as if it was a positive command. No prescience is requisite to forecast the consequences. The Commission would become the practical managers of all our railroads. They are to be elected every two years by a popular vote. In the absence of some radical change

of party methods, the Commission, to be elected from time to time, would represent and execute the policy of the dominant party, and unconsciously or intentionally manipulate this great interest for the benefit of the political organization to which they belong. Railroad property, on the successful, judicious and just management of which the future growth and prosperity of the State so essentially depend, would become the prey of the spoilsmen and an irresponsible oligarchy, far more dangerous to political morals and the business interests of Tennessee than any possible railroad combination would be firmly established in our midst.

We do not, by these comments, intend to cast any imputation upon the defendants. There is nothing in this record which, in any degree, impugns either their actions or motives. So far as we can see they have, in good faith, endeavored to perform their duties as they understand them. Our object is simply to point out the extraordinary powers attempted to be conferred by the act and to indicate the large opportunities which it affords for an abuse of power and an invasion of vested rights under the color of authority; how it is that railroad organizations could be subjected to party service under its provisions and be manipulated as well against as in furtherance of the public interests, and to say, in the language of the Supreme Court of Tennessee, in the case of *Farnsworth & Reeve v. Vance & Fleming*, that "this tremendous power" does not, as we think, "*lurk* within the principles of legislative power." We repeat, the regulating power of the Legislature and the courts is sufficient to compel railroad companies to perform all their undertakings in favor of the public, and to prevent or punish all derelictions of duty. The Legislature can enact laws within constitutional limits for the regulation of railroads and railroad operations, but it cannot lawfully authorize a commission, by direct or indirect legislation intended to accomplish that end, or necessarily involving that result, to take control of their business and operations. Such legislation would be an unauthorized and unconstitutional invasion of private rights.

The act is also, as we think, a regulation of inter-State commerce, and to that extent an intrusion upon the exclusive legislative authority of Congress. The reasons for this belief will, by special request, be stated by Brother Hammond.

Other objections to the constitutional validity of the statute, which we think are entitled to grave consideration, have been urged in argument. But as those already discussed are decisive of the case, we do not deem it necessary to further consider or discuss them in this case.

The prayer of complainants for a preliminary injunction will be granted.

BAXTER, *Judge, etc.*

DEMURRER OF DEFENDANTS.

THE LOUISVILLE & NASHVILLE RAILROAD COMPANY

vs.

JOHN H. SAVAGE, J. A. TURLEY AND G. W. GORDON, RAILROAD
COMMISSIONERS OF THE STATE OF TENNESSEE.

The Demurrer of the Railroad Commissioners of Tennessee to the Bill of the Louisville & Nashville Railway, filed against them in the United States Circuit Court, sitting at Nashville, Tennessee.

Respondents, reserving all benefit of exception to the errors in said bill contained, and not admitting any matter or thing therein to be true, demur thereto.

1. Respondents demur because there appears no equity or grounds for relief upon the face of the bill.

2. It appears from the face of the bill and exhibits thereto, that respondents are citizens of Tennessee, and that the act of the Tennessee Legislature under which respondents were appointed Commissioners, had reference to and was legislation of and concerning so much and no more of complainant's railroads as are located and operated within the State of Tennessee, and which several roads so operated in Tennessee were incorporated by the State of Tennessee, and are now held and operated by complainant under charters granted by the State of Tennessee, so that in fact and in law complainant, as to the roads so held and operated in Tennessee, is a corporation of Tennessee, and under the control and protection of the laws of Tennessee, and not of Kentucky; and therefore, this honorable court has no jurisdiction to hear and determine the matters in controversy, the same being cognizable in the courts of the State of Tennessee.

3. For demurrer to so much of complainant's bill as claims a contract and legal right for complainant to charge any rate whatever which complainant may think proper up to and below the maximum named in the charter, respondents show that the words named in the charter and set out in the bill contain no contract, agreement, or words of release, exempting complainant from future legislative control, and no words sufficient to estop the State from reducing or regulating the rates and charges of complainant for freights and passengers. On the contrary, it appears from a correct reading of said charters that the Legislature limited the rates and charges of complainant and did not declare any purpose or intent to release the sovereign power of limitation in the future.

4. And for further cause of demurrer, respondents say that the right to regulate the freights and charges of common carriers, like complainant, is a sovereign power and prerogative inherent in the people of every State necessary to the general welfare, and that an intent by a Legislature to release, sell, or surrender the power to

regulate the rates and charges of railroads, coupled with an overt act, would be treason to the State, and therefore any supposed law or contract so made, although misnamed a charter, would be null and void.

5. Respondents also demur to so much of the bill as seeks to enjoin the action of respondents to prevent other parties from bringing suits against complainant.

6. Respondents also demur to so much of the bill as assumes that cotton and tobacco are articles of inter-State commerce any more than wheat, corn and many other articles produced or manufactured in Tennessee, and carried beyond its limits.

7. Respondents also demur to so much of said bill as concerns commerce among the States and foreign nations, inasmuch as the said act of 1883, in its caption and in the body thereof, speaks only of regulating railroads in the State of Tennessee, and says nothing in regard to railroads out of the State, or of inter-State commerce.

8. Respondents also demur, and say that the State of Tennessee has a constitutional right to create a railroad commission with power to revise complainant's tariff of freights and charges, and to inspect and supervise the operations of complainant's roads, so that the same may be operated in compliance with the provisions of its charters and the laws of the State.

9. For demurrer to so much of the bill as in substance charges that all of these suits are to be tried before juries, whom the court will judicially know are generally prejudiced against railroad companies, respondents say that the court cannot lawfully or judicially know any such thing; that no custom, law or constitution invests the court with any such power, and that this charge by complainant is ungracious and a gross slander and scandal published against an ancient and most honored instrumentality for the administration of public justice which is secured to Tennesseans by constitutions and laws, State and Federal, and said charge should be stricken from the bill for slander and impertinence.

Respondents therefore pray that the court may decree that respondents shall not be required to make further answer to said bill.

S. F. WILSON,
JOHN J. VERTREES,
Solicitors.

We certify that in our opinion the foregoing demurrer is well founded.

JOHN J. VERTREES,
S. F. WILSON,
Solicitors.

I, John H. Savage, one of the defendants above named, do make oath and say that the foregoing demurrer is not filed or interposed for delay.

JOHN H. SAVAGE.

Sworn to and subscribed before me April 22, 1884.

CHARLES NASH, D. C.

ANSWER OF DEFENDANTS.

THE LOUISVILLE & NASHVILLE RAILROAD COMPANY

vs.

JOHN H. SAVAGE, ET ALS.

The joint and separate Answer of the Defendants, John H. Savage, John A. Turley and George W. Gordon, to the Bill filed against them in this cause.

Respondents suppose complainant has recited in the bill substantially the legislation of the State of Kentucky creating it a corporation, and giving it the exclusive right to monopolize transportation on the railroad from Louisville to the Tennessee line. Respondents suppose complainant has set forth the provisions allowing complainant to charge tolls. But respondents deny that the words used in said charters were so intended, or are sufficient in law, to exempt complainant from legislative control in the running and management of its road, or to estop the Legislature from regulating and fixing the tolls and charges of complainant for transportation at just and reasonable rates for the services rendered.

Respondents show that the General Assembly of Tennessee, on the 4th of December, 1851, did not incorporate the Louisville & Nashville Railroad, extending from Louisville to Nashville, but did incorporate, as the caption of the act says, "The Louisville & Nashville Railroad," for the construction of a railroad from the line between the States of Kentucky and Tennessee, so as to connect the cities of Louisville and Nashville. Respondents show that the purpose of the Legislature, and the effect of the above act, was to make the said corporation a Tennessee corporation, and whether it be a corporation created or adopted, it is in all respects a Tennessee corporation from the Tennessee line to Nashville, possessing different rights, and subject to different laws from the part north of said line.

Respondents show that said road south of the Tennessee line was built under and controlled by Tennessee laws, and derived its franchise, right of way, right to toll, from the State of Tennessee. That said part of said road accepted State bonds, and directors from the State of Tennessee, and pays taxes, and is protected by and is bound to obey the laws of this State.

Respondents show that if complainant is not a corporation of Tennessee, then, in legal phrase, it must be a foreign corporation, and if such be the fact, as alleged in the bill, it is merely permitted to do business in Tennessee. This license or permit can be withdrawn and the corporation expelled, because no Legislature can grant a

permit or license not repealable by its successors. Respondents, to sustain this view, expect to produce on the hearing the Acts of the Legislature in reference to complainant's road, by which it will appear that complainant perverts the meaning and effect of the Tennessee Legislature.

Respondents admit that the bill recites truly the provisions of the charter of the Nashville & Chattanooga Railway, so far as the same appears therein, and also so much of the Memphis & Charleston Railway as is mentioned in the bill.

Respondents also admit that the act of the 4th of February, 1852, incorporated the Nashville & Memphis Railway Company.

Respondents admit the Act of the 11th of February, 1852, mentioned in the bill.

Respondents admit the act of the 16th of December, 1853, mentioned in the bill; and as to the matters recited in the bill in reference to the change of name to "Memphis & Ohio Railroad Company," the construction to Paris, the failure to pay bonds, the loan of \$125,000 by complainant before Sept. 1, 1867, respondents have no personal knowledge of these matters, and cannot admit or deny this allegation; nor have respondents such information or belief in regard to the alleged lease by complainant, or its terms, as enables them to admit or deny this charge.

Respondents suppose it true that the Legislature of Kentucky, on the 21st of February, 1868, passed an act to amend the charter of the Louisville & Nashville Railroad Company, but respondents deny that said act, or any act passed or to be passed by the Legislature of Kentucky, did or could confer any right upon said company to own, possess or operate a railroad, or any part thereof, in the State of Tennessee.

Respondents admit that there appears upon the statute book of 1868-9, an act misnamed "An act to liquidate the State debt contracted in aid of railroad companies in the State of Tennessee."

This act must be construed strictly and as the language of the railroad in whose interest the grant is made.

1. The act concerns the railroad companies in Tennessee, and none other.

2. The right to consolidate concerns, and is confined to railroad companies in Tennessee, no other company being mentioned in the caption or body of the act. No foreign company can consolidate with a Tennessee company. To consolidate or own this road complainant must show other legislation than the act of the 25th of February, 1869.

Respondents also say, in like manner the act of the 17th of December, 1869, did not authorize a consolidation, merger and destruction of the corporation known as the Memphis & Ohio Company. The road from the Kentucky line is still a Tennessee corporation under Tennessee law. The loan of bonds may amount to a purchase by complainant, but the franchise and corporate rights exist under Tennessee law.

Respondents admit the incorporation of the Clarksville & Louisville Railway, the appointment of a receiver and the sale and purchase by complainant; and while respondents believe that the policy of sale was inspired by railroad officials and speculators, and was unfortunate for the State, and the means and methods by which it was accomplished were a departure from correct legislation and judicial action, they consider the matter settled so far as to put complainant in possession of the said road with a right to operate it under Tennessee laws, but in no sense to make it anything else than a Tennessee corporation.

Respondents, answering to the best of their knowledge, information and belief, say that the allegations in the bill so often repeated, "That complainant's charges

are uniformly below the maximum rates named in the charter" are false. On the contrary, respondents believe that complainant in many instances charges shippers more than the rates claimed by the charter, and is guilty of repeated acts of extortion and discrimination, and operates its road in violation of its charter and the laws of the State in many particulars.

Respondents do not believe that the net earnings are insufficient to pay interest, running expenses and repairs, unless it be that the debt and stock has been fraudulently manipulated, so as to represent in figures largely more than the cost of the road.

Respondents admit the incorporation of the Edgefield & Kentucky Railway, the sale by the court, and purchase, possession and operation thereof by complainant, as set forth in the bill.

Respondents admit the incorporation of the Tennessee & Alabama Railway Company, also the incorporation of the "Central Southern Railroad Company."

Respondents admit the consolidation of the companies named, forming the Nashville & Decatur Railway Company, and respondents admit the lease of the last named road by complainant. Respondents cannot admit that their rates are below the maximum named in the charter in many particulars, but will insist that upon this line of road complainant has been guilty of extortion and discrimination, and has taken more from shippers in many instances than is allowed by their charter and the laws of the State.

Respondents say that the Nashville & Decatur Railway's right to take toll is the same as the Nashville & Chattanooga Railway, and none other. But these respondents say that the charter of the Nashville & Chattanooga Railway Company, or that of any railway company in the State that may be in the same terms of said charter, does not fix the rate of toll to be charged by said company on freights and passengers, but simply prescribes a limit of charges which they "shall not exceed," and that on freights for only one distance, to-wit, one hundred miles. And so respondents say that the clause quoted in the bill, page 7, printed copy, to-wit: "The said company shall have the exclusive right of transportation of persons, goods, merchandise and produce over the railroad to be by them constructed; *Provided* that the charge of transportation or conveyance *shall not exceed* thirty-five cents per hundred pounds on heavy articles and ten cents per cubic foot on articles of measurement for every one hundred miles, and five cents a mile for every passenger," is not a grant of power to charge up to the rates mentioned, but a limitation upon the company's present right to charge more than said rates. And if the aforesaid clause in the charter, in regard to rates on freight, *did* intend (which respondents deny, however), to grant authority to the company to charge any rate up to the maximum therein mentioned, then it would be but one rate only, namely, thirty-five cents per hundred pounds, for one distance only, namely, one hundred miles on heavy freights; and one rate only, namely, ten cents per cubic foot, for one distance only, namely, one hundred miles, on articles of measurement, without providing any rate for any intermediate distance between nothing and one hundred miles, and without providing a rate for any distance beyond a hundred miles, thus leaving it to the company to establish reasonable rates for all such intermediate distances, and for those beyond one hundred miles.

As to what the State of Tennessee did intimate or did not intimate, respondents know nothing. The laws speak for themselves. It is not the practice of a sovereign power to intimate but to command by its laws, and ignorance of these laws

will not excuse a railroad or a citizen. As to whether money would have been invested or not in the many supposed cases mentioned in the bill, respondents know not, but are of opinion that capital is always ready to build a road where the business and resources of a section make it expedient to build one. As to what complainant would or would not have done in regard to the buying and leasing of roads if it had thought the State had or claimed the right to reduce rates of freight to just and reasonable rates, cannot add to complainant's right or diminish the power of the State. Complainant cannot gain right by gross errors in law or of fact. Such charges in the bill are worthless, and deserve no answer.

Respondents admit the introduction of the bill No. 8, its passage in the House and transmission to the Senate; also the bill No. 178, known as the Edmundson bill.

Respondents admit that the Senate Journal recites that bill No. 8 was amended by striking out all but the caption thereof, and inserting the Edmundson bill.

Respondents say that it is the practice of the Legislature of Tennessee to refer bills to committees for consideration, and that such committees often amend bills, and report them back, which amendments are not noted on the journals; and that amendments are sometimes offered and accepted by the author of a bill and not noted on the journals; so respondents say that the original Edmundson bill, at the time of its introduction, is no satisfactory evidence of the contents of the Edmundson bill at the time it was offered as an amendment to House bill No. 8. The journals show that matter called the Edmundson bill was offered and adopted. If any other matter had been offered and adopted, and certified by the proper officer, although misnamed, it would be a valid law. Respondents say that they are informed that the original draft of the Edmundson bill had been amended in many particulars by Senators before it was offered and adopted as an amendment to House bill No. 8.

In regard to the constitutional passage of the law, the complainant charges, in substance, that the law under which respondents are acting as Railroad Commissioners, was not passed in conformity to the provisions of the Constitution of the State of Tennessee. Respondents state that to the best of their information and belief, this charge is untrue, and that said law was passed in accordance with the usage, custom and practice of the General Assembly of the State of Tennessee, and in accordance with the Constitution of the State, and in support of this opinion and belief, respondents refer to the history of the passage of said law, as contained in the journals of the House and Senate of the General Assembly of 1883; and respondents herewith file, marked exhibit "A," to this answer, a paper containing extracts from said journals, showing the steps taken in the passage of said law, and also showing that it has been the practice of the General Assembly, both before and since the adoption of the present Constitution, to "concur in" amendments without the call of the ayes and noes, and giving instances of this practice from the journals of the General Assembly of 1883, 1881, 1879, 1866, 1865, 1859 and 1860. And respondents therefore say that the charge that said act, under which they were appointed commissioners, did not receive a constitutional majority of the House, and is not the law of the land, is false, and that the material allegations in the bill concerning its passage are hypercritical, and without any solid foundation in fact or in law.

Respondents are content to pass the charges of the bill in regard to Art. II., of

the Constitution of Tennessee, sections 17, 18, 19, 21, without further or other notice, as the questions involved are matters of law for the court.

Respondents, answering the charge in the bill concerning "rights, privileges and immunities or exemptions," and the want of power to suspend general laws as provided in article 2, section 8, of the Constitution, say that it is strange complainant should make such an argument, inasmuch as complainant began life in monopoly, privileges, immunities, and exemptions; that it was created by a special law extended to no other member of the community, conferring a royal prerogative to take toll, and an exclusive right to build and operate a public highway, of great value, and the sovereign power to take the private property of citizens for this purpose.

Respondents say that they have before them a document of 112 pages, headed "Charter of the Louisville and Nashville Railroad Company, with Amendments to 1869," which was compiled by said road for its own use, as respondents are informed, and from which it appears that there are more than twenty special laws passed by the Legislature of Kentucky, conferring exclusive rights, privileges and immunities on complainant not extended to or applicable to any other member of the community. It also appears that more than a half dozen such laws have been passed by the Legislature of Tennessee, in reference to the Louisville and Nashville main stem, and a great many more with reference to the other roads which complainant claims to own and operate. These special laws concern only the roads mentioned in them, and exclude all other members of the community, conferring upon the roads some of the royal prerogatives of sovereign power, and rights and privileges of great value. In addition to these special grants there is upon the statute books of both of these States many laws passed in the interest and for the benefit of railroads, which constitute a system of class legislation made at the request and for the benefit of railroads as a class, and which are common and applicable to all railroads alike, and which exclude and do not concern any member of the community but a railroad. These general laws appear in the Codes of the States, as railroad laws, and the special statutes passed for a particular road, are found in the acts or in digests made by the railroads for their use. Hence it appears that railroads are the creatures of special class legislation discriminating against every other member of the community, which laws say nothing about and are not applicable to and confer no privilege on boats, wagons, hacks or other vehicles; yet, when a law is passed to control and regulate this corporate power and peculiar property, which is used to wrong the citizens, they cry out "discrimination" because these other parties are not regulated by the same law that regulated them. The hacks, wagons, boats, ferries and turnpikes are all regulated by law, and in a different manner from railroads. No law could be made to regulate railroads and hacks, wagons, ferries and turnpikes in the same manner. The Legislature judges in what particular each should be regulated.

Laws made for one are in general not applicable or proper for the other.

A natural person pays a poll tax, can commit arson, murder, and can do a variety of things and suffer punishment, in ways wholly inapplicable to railroads. Also, in addition to the exclusive privileges and peculiar franchises granted to railroads, there is quite an extended list of criminal offenses made such for the special protection of railroads, and which crimes can only be committed against a railroad,—never against a wagon, boat, ferry, turnpike or natural person; hence, it is the exclusive right of the Legislature to declare penalties and punishments against such parties and in such manner as they think the public good requires. They

may declare a penalty against corporations and not include persons or wagons, inasmuch as there are a multitude of laws concerning persons, wagons, boats and other occupations that do not include corporations. Infants and adults are not governed by the same laws. Our common schools are not protected under the four-mile law, while other schools are. The towns and cities of Tennessee are classified by the number of the inhabitants, and governed by special laws applicable to each class. The Michigan acts of 1873 discriminate between the railroads of that State in many particulars, having regard to length of road—whether in the upper or lower part of the State, and excludes the Paw Paw Railroad entirely from its provision, and fixes freight at three cents on some roads, and allows five cents on others. Railroads are also classified by statute and by commissioner, and different rates of charges allowed, in Missouri, Alabama and Georgia.

Complainant might with the same kind of logic insist that the man who steals a chicken should go to the penitentiary as long as another for horse stealing, or that an assault and battery should be punished like a murder, or that it discriminates against complainant because millers and distillers are not included.

As to the penalties and lawyers' fees, the act is intended to be penal. It intended a penalty upon a wrong-doer, such as is usually enforced by the old-time *qui tam* action. The United States revenue laws furnish many illustrations of this principle, with this difference, that these laws often prescribe much heavier penalties against citizens than is declared by the Tennessee Legislature against wealthy corporations. There is nothing in the argument of taking private property for public use. When men are found guilty of violating the laws of the State or of the United States, and are fined, their private property is taken for public use.

If a party is found guilty of discrimination or extortion in a civil action, the Legislature, to prevent such offense, has the power to make the damages punitive in like manner as to assess the fine in a criminal proceeding. There is no violation of the Constitution in allowing the lawyer fee. In the old proceeding in ejectment or trespass for *mesne* profits, the law gave the plaintiff his lawyer's fee and costs, but gave it in no other action, and neither Coke, Bacon or Blackstone called it discrimination.

Respondents admit that the said act of 1883 authorized the Governor to appoint three Commissioners, and section 13 and 14 made it the duty of such Commission "to carefully consider and revise all tariffs for charges of transportation," and that said Commission were charged with the duty of preventing discrimination and unjust and unreasonable charges for transportation by railroads operated in the State of Tennessee, and that their opinion was made *prima facie* evidence of extortion by the railroad, if higher rates were charged than indicated by the Commission. But respondents deny that said act did give, or that said Legislature intended to give, the Commission power to *arbitrarily* order complainant to transport passengers and freight at certain rates, or to do any act arbitrarily. On the contrary, the proceedings of the Commission are marked and prescribed by law in the same manner, and quite as plain, as the duties of judges and other State officials. Respondents never attempted any arbitrary act but professed and desired to proceed by the law and the proof. Respondents refer to the said sections 13 and 14, and say that so far from vesting respondents with arbitrary power, they declare the right of the railroads to appear and make such proofs as they might desire in regard to revision, and the Commissioners are directed to hear the parties to the controversy by counsel and such evidence as may be offered, with other directions:

calculated to guard the rights of parties by the rules of law as administered by courts. As to the penalties prescribed, they are such as constantly appear in the legislation of Congress and of the States. The allegation that because there is a penalty given to the State and damages to the party injured that therefore the party is punished twice, is of no force. Respondents say, in very many instances a crime is committed the laws of the State and of the United States prescribe fines, forfeiture and imprisonment, also indictments for the Government, and damages for the citizen. Such is the rule in Tennessee in many cases from murder to smaller offenses. As to the charge in the bill that "all of such suits are to be heard before juries whom the court will judicially know are generally prejudiced against railroads," respondents say that no court can legally know any such thing; that complainant with equal propriety and the same kind of logic could assert before the jury that the court was prejudiced for or against complainant. The jury system is the birthright of the Saxon race and the glory of the common law. Bad must be the character and the cause of the men who will not trust their countrymen. If the people are prejudiced against railroads it is because the railroads have wronged them.

Respondents deny that said act of 1883 violates the Constitution of the United States in any manner whatever.

Respondents admit "complainant had the power to call upon the State when the charter was granted to fix *permanently* a maximum of charges." But respondents say that complainant did not call upon the State to fix *permanently*, and that the State did not fix *permanently* a limit of maximum charges, nor did the Legislature then intend to fix a *permanent* limit of maximum charges; and respondents say that if the Legislature which granted complainant's charter had intended to grant a *permanent* limit of charges, that such intent, coupled with an overt act, would have been treason to the State, and such a law would be void. It was then and is now the right of the people of the State to have all official and public functionaries serve them for a reasonable reward. Railways were created by the people for the people, and not for railways, and are as much public servants as the sheriffs or the judges of the State. It is not true that the State did agree with complainant or any other railroad to fix *permanently* a limit of maximum charges; nor was any such word put in the charter; nor did the State use any word of release [of power or assurance against subsequent legislation; nor did complainant ask or demand of the Legislature any such concession or surrender of the rights of the people to regulate tolls in the future; and if complainant had so demanded and a corrupt or unwise Legislature had by express words attempted to release all future legislative power to reduce charges to just and reasonable rates, and if the law or charter had said that the limit was fixed forever, unalterable by future Legislatures, respondents affirm that such an act would be void. No General Assembly of Tennessee can prohibit future Legislatures from fixing a proper limit to charges, because no Legislature can bargain, sell or surrender legislative power, or make a law that a subsequent Legislature cannot repeal; nor can a Legislature make a partial and unjust law and misname it a charter and grant to a corporation the right to plunder, oppress and take unreasonable toll from the people. The limit fixed in the charter was only evidence of what the Legislature then thought reasonable, but no evidence of what is reasonable now. What was reasonable forty years ago would in many instances be unreasonable extortion now. The public is entitled to all benefits arising from scientific discovery, and the better use of steam and machinery.

Respondents admit that the Legislature had the right to fix a maximum limit in 1845 and 1852, but such limit was for that time and until otherwise ordered by succeeding Legislatures. And it may be true that the limit was then reasonable or expedient, but the very fact that it was a limit and not a sum certain, shows that the Legislature did not assume to know accurately what was reasonable; and inasmuch as there were no words of permanency or release of future power to regulate, the claim of complainant is, therefore, without foundation in law. It is the doctrine in regard to charters and grants by a sovereign, that nothing passes to a grantee by implication, presumption or argument. When there is ambiguity, the grantee takes nothing. To sustain the claim of the grant of a prerogative or exemption from legislative control, and to estop the State in a matter where the Legislature might have control if such a case should happen, the grantee must show express words so certain as to amount to what Sir Edward Coke calls a certainty to a certain intent in every particular, which excludes all argument or inference to the contrary. Respondents therefore say that complainant's pretended contract right to charge unreasonable rates is not expressed nor given by the language used in the charter, nor is a necessary, reasonable or legal inference from any word used in the charter or from the nature of the business, or the character of the limitation prescribed. On the contrary, it is a claim, in derogation of common right, in hostility to the public, and not in accord with the usual course of legislative action nor with the expectations and understanding of the Legislature and people at the time the charter was granted, who were expecting and who were promised great riches and prosperity to flow from an increase of facilities to market and constantly decreased rates of freight by the improvement and building of railroads. To assume that the people and Legislatures of 1845 and 1851-2 intended the maximum limits then mentioned should be *permanent* and *unchangeable* would be to assume that they were ignorant or corrupt, and that they disbelieved the predictions and promises of railroad builders and railroad advocates, whose eloquent tongues painted in glowing and prophetic words the glorious and successful future of the system then in its infancy. To advance or retrograde is a universal law in the affairs of men. A permanent tariff in 1845 would have excluded all hope of progress and betterment. It would have been unwise then, and would be equally unwise now. The world moves and changes each day, and there is no business more changeable or discordant than railroading. As a rule no two roads have the same charters, or have the same tariffs or the same rules of business, nor are their rates permanent, but are constantly changing. It may be said that no human wisdom could make a tariff that would remain just and reasonable to the shipper and the railroad for any great length of time. Tariffs of freights need constant watching and changing as business and commerce change. What is just to-day may become unreasonable in a short time hereafter. The question is shall the avarice and interest of the railroads determine what is just and reasonable, and thereby enrich themselves by extortions on the people, or is it within the power of the Legislature to provide inspectors, over these roads, and prescribe methods by which these inspectors shall force the roads to operate them in accordance with the laws of the States for a reasonable compensation.

Respondents therefore affirm that said act of 1883 does not violate the Constitution of the United States, and that it does give to the Commission the power to revise complainant's tariff of charges to just and reasonable rates within the maximum limit, or above the limit if such charges are unreasonably low. But re-

spondents claim no power to do any act that can affect the rights or bind complainant. Respondents can only express an opinion as to the condition of complainant's road, and the justice and reasonableness of the charges, and this cannot affect complainant's right in any way, except in the event of a suit to impose upon the complainant the duty of showing to the court that the charge complained of is just and reasonable, and the imposition of this duty is right and legal. It is a mere rule of evidence, which rules are so administered by courts and prescribed by Legislatures as to put the burden of proof upon the party who, from the circumstances, is presumed to know most about it and can best prove it. In all contests for work and labor, the party performing it is held to prove the work done and its value. The roads are properly held to prove their rates reasonable, and the clamor in the bill about injustice and discrimination in fixing the burden of proof is a false and unreasonable clamor.

Respondents admit that they did prepare and print what they called a "basis" by which to revise the tariff of the various railroads in the State, but they deny that they had revised or fixed anything. It was a mere suggestion or proposition to elicit proof and argument from the railroads and the shippers, and but for the convenience of comparison and a saving of time a blank sheet would have answered as well.

The railroad officials were informed that the Commission desired to hear all the proof and argument that could be produced in their behalf, and were requested to send their best men before the Commission, and told that the Commission would hear them as long as they desired to talk, and that each railroad would be heard separately, and after all had been heard the Commission would commence the work of revising the tariffs in the light of all the proofs and all the arguments of all the parties, and no tariff would be announced as "revised and approved" till the whole work had been finished. The officials were further informed that if errors should occur in such revisions the Commission would correct them as soon as the same should be made to appear.

Respondents admit that the basis aforesaid was in many particulars below complainant's rates, but deny that complainant's rates are just and reasonable, or are below the maximum claimed by them. Respondents are informed and believe that many of them are above the maximum, and that complainant, now under the protection of an injunction, is extorting from the people large sums every day, amounting to hundreds of thousands of dollars during a year.

Respondents deny that there was any danger that respondents would reduce complainant's charges below just and reasonable rates. Respondents did not intend a revolution, but a reformation. Respondents did expect to correct some of the most flagrant abuses and unjust charges by complainant, and in the course of time to teach complainant the propriety of avoiding discrimination and extortion. It was not the wish or duty of these respondents to embarrass or injure complainant. The pretended fears of complainant of injury by respondents' action are groundless, and respondents say that groundless fears will not authorize an injunction or a peace warrant. Respondents say that 23 States have railroad commissions, and several of these States have passed laws more stringent than the Tennessee act of 1883. Respondents further say that they are informed and believe that no railroads in any State have been injured by the management of commissions. On the contrary, respondents say that the reports of the commissions for Georgia, Alabama, Illinois, Missouri, and other States, show that the roads have been benefited by the

work of such commissions. Respondents say that the basis prepared by them by which to revise the tariffs of the several roads in Tennessee was a mere proposition to elicit proof and argument before them by the railroads and the shippers, and was on an average, they believe, higher than the tariffs fixed by the commissions of Georgia, Missouri, and some other States, and was lower than the Alabama tariff and lower than the tariff of the complainant. Respondents believe that if complainant had brought proof and argument before them, as complainant was requested to do, that a tariff would have been revised so as to give complainant just and reasonable rates, as respondents had settled nothing, but held all questions and rates and charges subject to proof and argument.

Respondents say that while preparing this answer one of respondents, to ascertain the truth or falsehood of the charge, so often repeated in the bill, that complainant's charges are below the maximum rates mentioned in the charter, visited the furniture store of Atwell & Sneed, on College street, Nashville, and caused Mr. Atwell to telephone to the agent of complainant at the Louisville depot as follows:

"How much is the charge upon 100 pounds of furniture from Nashville to Galatin (26 miles)?"

Answer—"Twenty-five cents at owner's risk."

"How much is it carrier's risk?"

Answer—"Seventy-five cents."

The house of Weakley & Warren, on the same street, which manufactures and sells furniture from the store, was then questioned as follows:

"Have you the printed tariff of the Louisville & Nashville railroad?"

Answer—"Yes."

"What will it cost me to ship 100 pounds of furniture to Pulaski (eighty miles) by that road?"

Answer—"Furniture per 100 lbs. to Pulaski, owner's risk, 48 cents; furniture to Pulaski, carrier's risk, per 100 lbs., 96 cents."

Respondents say that this railroad, by law, can only charge 35 cents per 100 pounds per 100 miles at the risk of the carrier, but here is a charge of 48 cents at owner's risk, when the charter only allows 35 cents at carrier's risk, which is nearly three times the amount allowed by law. This is most conclusive proof to show why complainant fears revision, and desires litigation and delay.

Respondents say that the revision of tariffs by the commission could not take away any legal rights of complainant. If juries should render wrong verdicts, intelligent judges would set them aside. The charge in the bill that complainant fears unjust suits at law, or that suits of any kind should be wrongfully brought, respondents believe to be fabricated and without the slightest foundation in the past history or present condition of complainant's roads. And as proof conclusive that complainant's fears are pretended, they copy from the brief filed by Ed. Baxter, attorney, of record on page 48, as follows:

"The system of the Louisville & Nashville Railroad Company has been increased until it now includes over 2,000 miles of road, lying in eight States of the Union, and yet, as we are informed by the chief attorney, there is not one suit now pending against the company in any of those States wherein it is claimed that the charges of the company are too high."

This declaration, which respondents believe to be true, answers and destroys all those charges in the bill made *quia timet* to obtain the injunction. The statement is suggestive in another particular. In less than forty years a road of 185 miles has

by conquest or diplomacy annexed or acquired more than 1,815 other miles of road. And also has paid dividends to its stockholders, and large salaries to its chief officials. Is this astonishing fact, this rapid increase in wealth and power, the result of honest toil and reasonable charges, or is it the result of extortions and oppressions?

Respondents having replied to the allegations in the bill, will present for the consideration of the Court their construction and understanding of the act under which they have been appointed.

“INTER-STATE COMMERCE.”

1st. Respondents say that they have never claimed, and do not now claim, the right to regulate or control, in any manner whatever, commerce among the States or with foreign nations.

2d. They do not believe that the Legislature intended to confer upon the Commission any such power.

3d. They do not believe that there are any words contained in said act of 1883 sufficient in law to authorize respondents to regulate, in any manner, inter-State commerce.

4th. They believe an attempt on their part to interfere with or regulate inter-State commerce by virtue of said act, would be wholly unwarranted by any word or sentence therein.

5th. They believe that said act, fairly construed by the rules of the common law, positively excludes the idea that the Legislature authorized, or intended to authorize, respondents to regulate inter-State commerce.

6th. Respondents say that said act of 1883, in its caption, and in sections 1, 8, 9, 12, 13, 18, 19, 20, 21, 24, 25, 27, 28 and 29, specially mentions and refers to companies and persons operating railroads in this State, and none other.

7th. Respondents say that the Court cannot presume or imagine the existence of a power that is not mentioned in this act, and is not a necessary incident of some other power granted.

8th. Respondents say that the caption is the key to the substance of the act, and that all general words are to be expounded as referring to this matter.

9th. Respondents say that where there is doubt or ambiguity in a statute, and where one construction would render a thing unlawful and the other would include only lawful matters, the latter is the legal construction.

10th. Respondents insist that there is no ambiguity, and that the act of 1883, in its words and meaning, is confined to railroads in Tennessee; yet if the words were doubtful as to what roads were intended by the Legislature, the Court would construe it to mean roads in the State, as none other are mentioned, and this only is lawful.

11th. Respondents also insist, that inasmuch as the power of the State to regulate railroads in the State is admitted as indisputable, that if the act of 1883 had attempted to authorize respondents to regulate inter-State commerce, it is not sound logic or good law for the Court to declare the whole act void for the reason that the Constitutions of the United States and of Tennessee distinguish commerce among the States from commerce within a State. They are things separate and distinct, whose boundaries are marked by broad constitutional lines, and in no sense mixed or indivisible. Therefore, respondents should only be enjoined from regulating inter-State commerce, leaving them free to act within the State.

12th. Respondents say the charge by the complainants that because the Commissioners suggested a basis of 600 miles, therefore they intended to regulate inter-State commerce proves the reverse. If respondents had so intended, a basis to reach New Orleans, New York, or Europe, should have been adopted.

13th. Respondents affirm that in their opinion there is no matter or thing alleged or proven by complainant in this cause, or apparent on the face of said act of 1883, that will authorize the Court to enjoin respondents from regulating inter-State commerce, but inasmuch as respondents have never claimed any such right, an injunction to that effect would be harmless.

Respondents say that the argument made by complainant in reference to section 26 of said act is unsound; that said section imposes no duties upon respondents violative of any right or constitutional provision; that the right to assemble for consultation, for mutual safety, and to petition for a redress of grievances, is a right secured to American freedom. The manifest purpose of the section is to harmonize conflicting legislation between different States for the benefit of all. This means simply to adopt in legislation the rule adopted by courts in the interpretation of laws. The courts look to the Legislature and decisions of other States, ancient and modern, which often furnish the rule and reasons for the decision. The Legislature contemplated separate State action. Respondents, as the representatives of Tennessee, have a perfect right to recommend to other States and to the world, by precept or example, whatever appears to them best for the general welfare, and no court can lawfully enjoin such action.

Commissioner Fink, by virtue of an agreement, called a pool, attempts to regulate the freight of about 40 of the most important roads in the United States, which agreement is enforced by forfeitures and stipulated penalties. If the roads can thus regulate inter-State commerce by agreement, the States may lawfully agree upon a code of laws to be enacted by each State.

Respondents do claim that the State of Tennessee has a perfect right to regulate the freight of all the railroads incorporated by or operated within the State, and can compel them to carry freight for reasonable rates.

Respondents also assert that no matter how much a regulation of rates within the limits of the State may affect rates or commerce without the State, that Tennessee has an indisputable right to do so, and that neither Congress nor any Federal court can rightfully prohibit or enjoin the State or its agents in such action.

If the argument of complainant is good law, then, upon a like reason, the State could be enjoined from levying a tax upon lands or polls, for such a tax would increase the price of commodities raised within the State when carried beyond its limits, and therefore would be a regulation of commerce if the Court adopt complainant's logic.

But aside from the kind of legislation likely to result from such legislative contests as complainant's bill exhibits, it is the history of laws that no statute is ever passed which affects important interests that has not resulted in legal contests. Hence the courts sometimes declare that one thing or act may be within the letter and not within the meaning of the statute, and another may not be within the letter and still within the meaning and intent of the law, and also that it is the duty of courts to reconcile apparent ambiguities and sustain legislation where the intent appears, and never to infer an unlawful intent if another could exist. The application of these rules will answer the criticism of complainant. It will be admitted that the Legislature has the power to regulate the rates, but complainant fails

to show the legal means and methods of doing it. The complainant owed it to the public and its patrons to show the right way while complaining of the wrong. The policy is to defeat all regulation.

EXTORTION AND TRIAL BY JURY.

Respondents insist that the argument of complainant that the crime of extortion is not described or defined with legal certainty by the first section of the act, is unsound. The act simply declares the common law.

1st. The road must transport and the shipper must pay "just and reasonable compensation." If there was no statute, or if this was all in this statute, and the shipper failed to pay, or if the road charged more than was reasonable, either party could sue at common law or under this statute, and the question for the jury to decide upon the evidence under the charge of the court would be reasonableness or unreasonableness of the rates, the amount to be fixed by the jury from the evidence and not by the law. The law fixes the rule of reasonableness. The discretion of the jury upon the evidence fixes the amount.

This same rule applies in action upon the case at law which modern bills in chancery have superseded to a great extent. The same rule in slander, trover, trespass, assault and battery, for goods sold and delivered, work and labor done, damages for homicide by citizen or railroad, and malicious prosecution. In all these actions for injuries the parties are entitled to reasonable damages, to be assessed upon the evidence at the discretion of the jury, who, in their discretion, may give punitive damages to punish the wrong-doer and prevent like offense.

For work and labor, property sold and delivered, the jury value the property upon the evidence. It is not usual for any two juries to render the same verdict in any suits of this kind, between citizens or corporations. Railroads have often moved for new trials, and the second jury sometimes increases the damages.

Hence the argument by complainant, that because damages and penalties are left to be assessed at the discretion of a jury, and are therefore uncertain, and may be assessed at different figures by different juries, therefore the act is unconstitutional, is unsound, and, if allowed, would repeal the wisest and most important rules of the common law.

Respondents say that extortion is an offense well defined at common law and in the English language as follows: "Illegal exaction." "To take that which is not due, or more than is due, or before it is due."

The act defines extortion by a railroad: "1st. To exact and receive more than reasonable compensation. 2d. To demand more than is specified in any bill of lading. 3d. To make *unreasonable discrimination* for its advantage or for the advantage of any connecting line or against any person, locality or corporation."

To take more than a reasonable compensation by a carrier was prohibited by common law. If the shipper sued the carrier the jury fixed the compensation by the evidence, and one jury might find one dollar and another ten. Respondents insist that this definition of extortion is full and certain in every particular.

Respondents also insist that the offense of demanding more than the rates specified in any bill of lading could not be made more certain by the English language. To constitute the third offense defendant *must discriminate with a motive.*

Discrimination alone is no crime. It must be *unjust* and *unreasonable* for or against some person, locality or corporation. It is a maxim of law, "That is certain which may be made certain." The jury would find for or against the

motive from the evidence under charge of the court. The word "discriminate" has a fixed meaning, and that is, "to make a difference more or less." The court should charge "that defendant's rates should be the same to all for like service under like circumstances," and if defendant charged different rates to different parties for like service with the intent aforesaid, that would constitute the offense of extortion by unjust and unreasonable discrimination. Unjust and unreasonable discrimination means a difference in rates intended to help one party or hurt another. This is legal certainty. Respondents say that many offenses punished by indictment are defined in like manner. Respondents know of no statute defining lewdness, drunkenness, fornication, adultery, games of hazard and address, assault and battery, and the like. The definition of such crimes is to be gathered from the word used, and courts must understand them as Americans understand them. Respondents also say that because State offenses may be imperfectly described, furnishes no legal ground for an injunction by a Federal Court. If this kind of jurisdiction is allowed, a State Legislature could not pass a law that a Federal Court could not nullify or revise.

That it is the sole province of the jury to find upon evidence whether the charge of the carrier is just and reasonable or not, cannot be denied. And if this be true, it follows as an unavoidable conclusion that the jury may lawfully find under the evidence whether a discriminating charge is unjust and unreasonable or not, and the intent that caused the discrimination. It is therefore error to say that this act commits the administration of law to the unrestrained discretion of juries in any manner different from the rules of the common law. Neither court nor law can determine these questions without evidence, and all evidence is for the jury.

THE JURY AND COURTS.

Respondents say that in their opinion the Act of 1883 gives the juries of the country no power dissimilar in any respect from the powers conferred in other cases at common law. Nor is the power conferred upon juries by the Act of 1883, in any way different, or in any manner more unreasonable than the power conferred upon juries to assess damages and transfer private property to complainant. In this particular, different juries often render different verdicts, and in many instances seemingly unjust and unsatisfactory to the citizen. Respondents say that all questions submitted to a jury under the Act are submitted under the charge and supervision of the court. Respondents deny that juries are corrupt or less worthy now than in former days. Respondents believe that juries, as a rule, are governed by and pay great respect to the charge of the court and the evidence. Respondents say with an intelligent, honest and impartial judge there is little probability of danger to any party before the juries and courts of Tennessee. Respondents therefore say that complainant's charges against the jurymen of Tennessee are ungracious, unreasonable and untrue. Respondents admit that when great wrongs have been inflicted on a community and a whole people are aroused and demand punishment and protection, that all honest judges and jurymen are wide awake and vigilant not to punish the innocent but that the guilty may not escape. Complainant might with as much plausibility cry out against the judges, State and Federal, as prejudiced against it.

POLITICIANS AND PARTIES.

Respondents say, in response to the argument that respondents could, if they wanted so to do, "appropriate all the railroad property in the State to the public

use without compensation," that if respondents should make such an appropriation, it would be in violation of law, in violation of their oath of office, and a crime worthy of impeachment and punishment. Respondents also say that in nothing they have done or intended to do, is there any ground for such a charge against them by complainant. Respondents say that as officers of the State of Tennessee, the official oath under which they are acting is in substance the same as the official oath of the Federal and State courts. Respondents claim that as such officers, they are entitled to the presumption of integrity, impartiality and faithful discharge of their duties, and that neither law or reason warrants complainant in imputing to them, directly or indirectly, illegality or wrong. It is the interest of respondents to do right. The people of Tennessee are intelligent. Respondents could not do wrong and hide it under a bushel. They neither own or control the public press. They are upon small salaries, without money to print or clerks to write. Respondents say their personal interest is in strict justice to complainant, and they do not believe the people of Tennessee demand more. Respondents also say that because a power granted may be abused is no argument against its existence, nor does it prove that Congress or a State Legislature may not grant it, nor will the fear that a State officer may abuse his power authorize a court to declare a law void. The courts, State and Federal, have been invested with very high powers over the property, liberty and life of the citizen. Complainant's argument, if allowed, would take from these courts all the powers conferred for the public good, and leave society without protection, for fear some modern Jeffreys might get upon the bench to hang innocent citizens, destroy railroads, and force juries to render unrighteous verdicts. This unsound argument can be urged with as much plausibility against honorable courts as against this Commission, who have a little brief authority and are put on trial before their countrymen every two years. Respondents insist that the power to do right or wrong belongs to courts and commissions alike, and the legal presumption is that each will do right.

Respondents say that the argument that the Commissioners might be politicians, and therefore might regulate railroads in the interest of their party, does not prove that the Legislature did not have the power and the will to create a commission, and such an argument, if admitted, bears equally upon every official, State and Federal, including the President, Congress, Judges, Governors and the Legislatures. They are all (with scarcely an exception) politicians, and some of them have the reputation of being highly prejudiced and unreasonable partisans. Nevertheless, all officials are entitled to the presumption of an intention to do right, and no injunction will lie for fear that they may do wrong. The wrongful exercise of legislative, judicial or executive powers may oppress and impoverish the people for a time. The American remedy for such wrongs is impeachment and the ballot-box. To say that the power to do good is prohibited because it may be used to do wrong, is a kind of logic unknown to the law.

And having fully answered defendants pray to be hence dismissed.

S. F. WILSON,
VERTREES & VERTREES,

Solicitors.

JOHN H. SAVAGE,

President of the Railroad Commission of Tennessee.

J. A. TURLEY,

G. W. GORDON,

Secretary.

[SIGNED.]

I, John H. Savage, respondent in the foregoing answer, do solemnly swear that the matters and things therein stated as of my own knowledge are true; and those stated as of opinion, information and belief, I believe to be true.

JOHN H. SAVAGE.

Sworn to and subscribed before me April 28, 1884.

CHARLES NASH,
Deputy Clerk U. S. Circuit Court.

[EXHIBIT "A."]

ANSWER OF DEFENDANTS.

EXTRACTS FROM THE JOURNALS OF THE GENERAL ASSEMBLY OF THE STATE OF
TENNESSEE, 1863.

"Mr. Manson introduced House Bill No. 8, To prevent unjust discrimination by railroads. Passed first reading, and referred to the Committee on Railroads. House Journal, page 78.

House Bill No. 8, To prevent extortion and discrimination by railroads in freight and passenger tariff. Passed second reading. House Journal, page 805. The question recurring on the passage of the bill as amended, the bill passed third reading by the following vote: Ayes 58, noes 27. House Journal, page 777.

SENATE.—House Bill No. 8, A bill to be entitled an act to regulate the operations of railroads in the State and for other purposes. Passed first reading. Senate Journal, 1863, page 669.

House Bill No. 8, To regulate the operation of railroads in this State. Passed second reading. Senate Journal, page 682.

Mr. Edmondson moved to amend House Bill No. 8, by striking out all excepting the caption, and inserting Senate Bill No. 187 (obviously this is an error and ought to be 178), introduced by himself on the same subject, and pending consideration the Senate adjourned until 1 o'clock P. M. Senate Journal, page 722.

The consideration of House bill No. 8, To regulate the operations of railroads in this State, and for other purposes, was resumed on Mr. Edmondson's amendment. Senate Journal, page 723.

Mr. Champion moved to lay the amendment offered by Mr. Edmondson to House Bill No. 8, To regulate the operation of railroads in this State, etc., on the table. Lost on a call of the ayes and noes by the following vote: Ayes 11, noes 22. *Ib.* page 724.

Mr. Thompson called the previous question on Mr. Edmondson's amendment, which was sustained, and Mr. Edmondson's amendment was adopted. *Ib.* page 726.

The consideration of House Bill No. 8, A bill to be entitled an act to regulate the operations of railroads in this State, to prevent extortion and unjust discrimination, and for other purposes was resumed. *Ib.* page 739.

Mr. Edmondson called the previous question on the passage of the bill, as amended, which was sustained, and the bill, as amended, passed its third reading. Ayes 23, noes 8. *Ib.* page 740.

Bill No. 8 returned by Senate to the House.

House receives Senate message transmitting House Bill No. 8, To regulate the

operations of railroads in this State, amended and passed. House Journal, 1883, page 867.

The Railroad Commission Bill, on Senate amendment, was made the special order for 2 P. M. *Ib.* page 892.

The special order being the consideration of House Bill No. 8—the Railroad Commission Bill—it was taken up on Senate amendment and the amendment read. Mr. Burrus moved the previous question on the passage of the bill. The ayes and noes were called for and the motion prevailed by the following vote; Ayes 57, noes 10. *Ib.* page 895.

Pending consideration a message was received from the Senate. The question recurring on the passage of the bill, there being no quorum voting: Ayes 57, noes 6. *Ib.* page 896.

House Bill No. 8, To establish a Railroad Commission, was taken up on Senate amendment, and the amendment was concurred in. A motion to reconsider was laid on the table. *Ib.* page 902.

Another instance of amendments "concurred in" without a call of the ayes and noes. House Bills Nos. 445 and 533 and 751, were taken up on Senate amendments and the amendments were concurred in. House Journal, 1883, page 869.

House Bill No. 291 was taken up on Senate amendment and the amendment concurred in. House Journal, 1883, page 869.

House Bill No. 255 was taken up on Senate amendment and the amendment concurred in. *Ib.* page 869.

House Bill No. 193 was taken up on Senate amendment and concurred in. *Ib.* p. 790.

House Bill No. 187, taken up on Senate amendment and concurred in. *Ib.* page 790.

House Bill No. 156, taken up on Senate amendment and concurred in. *Ib.* page 791.

House Bill No. 136, taken up on Senate amendment and concurred in. *Ib.* page 791.

(Same practice in Senate.)

Senate Bill No. 297 was taken up on House amendments and the House amendments were concurred in. Senate Journal, 1883, page 683.

Senate Bill No. 289 was taken up on House amendments and the House amendments were concurred in. *Ib.* page 683.

Senate Bill No. 14 was taken up on House amendments and the House amendments were concurred in. *Ib.* page 733.

Senate Bill No. 397, on House amendments, was taken up and the amendments concurred in. *Ib.* page 764.

The House amendments to Senate Bill No. 359 were concurred in. *Ib.* page 765.

SENATE, SESSION 1881.—Senate Bill No. 75, To protect food fish in this State. The House amendment was concurred in. Senate Journal, 1881, page 665.

Senate Bill No. 152, To amend the charter of Shelbyville. The House amendment was concurred in by the Senate. Senate Journal, 1881, page 666.

Senate Bill No. 277, To provide more just and equitable laws for the assessment and collection of revenue, was taken up on House amendments. The first, second, third and fourth amendments were concurred in. Senate Journal, 1881, page 691.

HOUSE, 1881.—House Bill No. 667, on Senate amendments. The amendments adopted by the Senate to House Bill No. 667 were concurred in as follows: First

amendment, second amendment as to stationery, etc., (reciting several other amendments). House Journal, 1881, page 982.

SENATE, SESSION 1879.—Mr. Brandon called up House message on House amendment to Senate Bill 190, which amendment was concurred in. Senate Journal, 1879, page 557. (This was a bill "To punish persons who fail to deliver produce, etc.")

Mr. Savage called up House message on House amendment to Senate Bill No. 254, which amendment was concurred in. Senate Journal, 1879, page 557.

Mr. Bledsoe called up House amendment to Senate Bill No. 185, which amendment was concurred in. Senate Journal, 1879, page 609.

Mr. Ewing called up House message on House amendment to Senate Bill No. 116, and the first amendment was non-concurred in, and the second and third amendments were concurred in. Senate Journal, 1879, page 611.

Mr. Ewing called up House message on House amendment to Senate Bill No. 116, which amendment was concurred in. Senate Journal, 1879, page 915. (This was a bill to give justices of the peace original jurisdiction, etc.)

Mr. Beckerdite called up House message on House amendments to Senate Bill No. 423, and the said amendments were concurred in. Senate Journal, 1879, page 674.

HOUSE, 1879.—House Bill No. 389 was taken up on Senate amendment and the amendment of the Senate concurred in. House Journal, 1879, page 897.

House Bill No. 967 was taken up on Senate amendment and the amendment of the Senate was non-concurred in. House Journal, 1879, page 897 (and other cases on same page).

House Bill No. 468 was taken up on Senate amendment and non-concurred in. House Journal, 1879, page 908.

House Bills Nos. 420, 483 and 485 were taken up on Senate amendments and the amendments were concurred in. House Journal, 1879, page 935.

House Bill No. 508, To equalize the salaries of officers, was taken up on the amendment of the Senate, and the amendment was concurred in. House Journal, 1879, page 885.

House Bill No. 133, To amend the criminal laws, was taken up on Senate amendment, and the amendment was concurred in. *Ib.* page 885.

House Bill No. 375, on Senate amendment, was taken up, and the amendment of the Senate was concurred in. *Ib.* page 885.

House Bill No. 354, on Senate amendment, and the amendment of the Senate was concurred in. House Journal, 1879, page 885.

HOUSE, SESSION, 1866.—Senate amendments to House Bill No. 713 were taken up and concurred in. House Journal, 1866, page 406.

Senate amendments to House Bill No. 687 were concurred in. House Journal, 1866, page 406.

Senate amendments Nos. 1, 2, 3 and 4 to House Bill No. 649 were taken up. Nos. 1 and 2 were concurred in. House Journal, 1866, page 388.

HOUSE, SESSION, 1865.—House Bill No. 123 was taken up, "To apportion representatives in Congress. Mr. Fusion moved to concur in Senate amendment, striking out DeKalb county from the fifth and adding it to the third district. Carried. House Journal, 1865, pages 279 and 280.

House Bill No. 89, To incorporate the Tennessee and Cumberland Oil and Mining Company, was taken up, and the Senate amendments, striking out the names of

Ed. I. Golladay and Samuel Golladay and inserting the names of Wm. B. Campbell and Delano T. Smith, were concurred in. House Journal 1865, page 275. (Also, Senate amendments to House Bill Nos. 136 and 94 were concurred in. Same page, 275.)

HOUSE, SESSION 1859-60.—Senate amendment to House Bill No. 359, "To relieve the Shelbyville Bank of Tennessee," and for other purposes, was concurred in by the House. House Journal, 1859-60, page 1147.

Senate amendment to House Bill No. 566, To regulate the time of holding the Circuit Court at Jasper, in Marion county, and for other purposes, was called up by Mr. Trewhitt, and concurred in by the House. House Journal, 1859-60, page 1159.

(Judge E. H. East was a member of the Legislature of 1859-60.)

SENATE, 1859-60.—House amendments to Senate Bill 289, To amend section 337 of the Code, so as to authorize the election of two justices of the peace in each of the wards in Nashville, were concurred in. Senate Journal, 1859-60, page 768.

House amendment to Senate Bill No. 282, To incorporate the Tennessee Coal and Railroad Company, was concurred in. *Ib.* page 768.

BIENNIAL REPORT

—OF—

A. J. McWHIRTER,

COMMISSIONER OF

AGRICULTURE, STATISTICS AND MINES,

For the Years 1883 and 1884.

INCLUDING THE REPORTS OF

JAMES M. SAFFORD, State Geologist,

On the Agricultural Geology of the State.

AND OF

CHARLES L. JUNGEMAN, Ass't Geologist of the Bureau,

On the Condition of the Mines.

NASHVILLE:

ALBERT B. TAVEL, PRINTER TO THE STATE.
1885.

REPORT.

BUREAU OF AGRICULTURE, STATISTICS AND MINES, }
NASHVILLE, January 1, 1885.

To His Excellency WM. B. BATE, *Governor of Tennessee:*

In compliance with an Act of the Legislature (Acts 1875, chapter 13), I herewith submit my Biennial Report for the years 1883 and 1884; also, the Reports of James M. Safford, State Geologist, on the Agricultural Geology of the State, and of Charles L. Jungerman, Assistant Geologist of the Bureau, on the condition of the Mines.

Dr. To amount of cash received from Hon. Atha Thomas, State
Treasurer.....\$16,000 00

To cash for advertising lands in Bulletin..... 164 00

\$16,164 00

Cr.	By cash paid	H. E. Colton, Assistant Geologist,.....	\$155 50
"	"	" Dr. A. Gattinger, " " and Botanist	470 30
"	"	" Jos. C. Guild, " "	615 28
"	"	" Chas. L. Jungerman "	59 35
"	"	" Traveling expenses.....	659 90
"	"	" Stationery account.....	276 25
"	"	" Printing account.....	198 60
"	"	" Postage account	795 15
"	"	" Express and freight.....	26 50
"	"	" Fertilizer account.....	28 00
"	"	" Crop statistics.....	540 65
"	"	" Other statistics.....	77 45
"	"	" Weather service.....	280 66
"	"	" Seed account.....	382 58

Cr. By Cash paid Agriculture.....	1,423	85
“ “ “ Book account.....	88	15
“ “ “ Expense account.....	576	04
“ “ “ Extra clerk hire.....	352	50
“ “ “ New Orleans Exposition, glass show bottles.....	378	04
“ “ “ Inspection of mines.....	67	20
“ “ “ Furniture account.....	404	74
“ “ “ Louisville and Boston Expositions.....	4,591	73
“ “ “ Immigration account.....	1,263	49
“ “ “ Geological survey of State—J. M. Saf- ford's expenses.....	100	00
“ “ “ Clerk of Bureau 21 months.....	2,100	00
		<hr/>
		\$15,911 91

The duties required of your Commissioner in the 4th section, chapter 13, Acts 1875, are many and varied, some of which we have found impossible to execute with the amount of funds and facilities placed at our command, notably those of procuring crop and other statistics, and studying the history and habits of insects injurious to the vegetation of this State, and suggesting the best methods for preventing the same.

STATISTICS.

Accurate statistical facts are to become the measure of the development of individual industries and of the State's progress. They are positive industrial forces, teaching the time, direction and method of action. Accurate information gives not only a skillful, but a bold, energetic policy.

The products of agriculture are the supporters of life and parent of all the arts; hence agricultural statistics are the most important of all statistics. They inform the producer as well as the speculator, of crop prospects, and leave the fruits or profits of labor in the producers' hands, where they are of most good to civilization. It is therefore eminently proper that the Commissioner of Agriculture, Statistics and Mines should each year obtain monthly statements as to the condition of live stock, condition and prospects of the growing crops, and as soon after the harvests as possible,

statements as to the yield of wheat, oats, rye, barley, hay, corn, tobacco, cotton, and other farm and fruit products; he should also ascertain the quantity of each marketed and the quantity remaining in the farmers' hands; he should also once each year ascertain the output of each and every coal mine, furnace, mill and factory, and prepare monthly and annual abstracts of the information thus obtained, and publish a sufficient number of copies of the same to furnish one copy to each newspaper published in this State, one copy to each member of the Legislature, one copy to each correspondent furnishing information for said abstract, and one thousand copies for general distribution. This can be accomplished in Tennessee if the General Assembly of the State will enact a law similar to that enacted by the Legislature of Minnesota in 1870, which makes it the duty of tax assessors to collect statistics upon blanks furnished by the statistician.

As regards the shipments of produce, etc., from each of the railway stations and the river landings of this State, it is simply impossible to procure reliable data of the same under our present law. We may interrogate every agent, but not one in twenty will do us the courtesy to respond, and we cannot compel them to answer.

We have endeavored faithfully to collect and publish monthly from April to November in each year reliable statistics of the condition of live stock, prospects and condition of growing crops, wages for farm labor and of other industries, but we regret to report that the means at our command for performing this duty in such manner as will fully meet the necessities of the case are wholly inadequate. The information furnished us is from voluntary correspondents, who cannot be expected to devote their time and labor necessary for the collection of statistics upon all the various subjects. The estimates of crops, etc., have been based upon reports received from six to eight hundred correspondents in all parts of the State, and are believed to be as approximately correct as could be procured under the present system.

WEATHER SERVICE.

The foretelling of the approach of cold waves, storms, frosts, cyclones and other inclemencies of the weather by means of the Signal Service and timely publication of the same, is regarded of

great importance to the agriculturist. Modern science has furnished us with this means to prevent injury to crops or animals, and we should develop it, to the end of reaching, if possible, every agricultural neighborhood in our State. It is believed, by the Chief Signal officer of the United States, that an appropriation of \$1,500 would provide the instruments also the signals to be used by day and night at each of the telegraph railway stations in Tennessee. If this service can be accomplished with an outlay of the above sum, it would result in great good to the farmer, and would more than repay the State by the saving of the hay crop alone. Tobacco, fruit, vegetables, and live stock might also be saved to the farmer by this service.

We publish monthly Reports of the Weather Service in Tennessee, based upon information received from more than fifty voluntary observers in different parts of the State, and furnish the same to the press of the State, also to the crop correspondents of the Bureau.

INSECTS INJURIOUS TO VEGETATION.

We have purchased from the distinguished scientist, Professor C. V. Riley, Chief of the Entomological Bureau, Washington, D. C., his entire works—8 volumes—upon the subject of insects injurious to vegetation, with the privilege of republishing in pamphlet form for gratuitous distribution, "The history and habits of such insects as are known to be injurious to vegetation in Tennessee, and the best methods of destroying the same," but have not compiled nor published a compendium because of the inadequacy of funds at the command of the Bureau. A Compendium of Entomology adapted to the wants of the farmers, gardeners and horticulturists of Tennessee would cost about fifteen hundred dollars (if with plates perhaps two thousand), and might in one season save them *one hundred thousand dollars*.

Dr. J. M. Safford, State Geologist and Professor of Natural History in the Vanderbilt University, has very kindly tendered his services to me in the matter of compiling this Compendium of Entomology for the State if the Legislature will appropriate the funds for its publication.

AGRICULTURAL.

Just at this time, as in all countries after great political cataclysms, throughout our country, a tidal wave is moving in the direction of internal development, and it might be said that this is the agricultural era of the United States. Our people have grown weary of the old political questions that so long agitated the current of life. They are becoming practical in all things, and are looking now after those permanent interests upon which the perpetuity of all government depends. It is needless to say that the first of all these is agriculture. Born of the necessities of humanity, it is the only true foundation for national wealth and independence, and all other interests radiate from agriculture as the central fountain of healthy development. We are essentially an agricultural people, there being a larger number engaged therein than in all other pursuits combined. Our soil is so fertile, our climate so favorable, that we have come to believe in a "manifest destiny" of agricultural success, independent of all other industrial resources which lie within our reach. Hence I emphasize the fact that the knowledge of wealth is too often the paralysis of industry.

The importance of this interest has demanded much of my attention. I have labored by night and by day for its advancement. A series of articles, "Economic Demands of Tennessee," have been prepared and distributed throughout the State by means of the public press; agricultural addresses have been delivered to a large number of the County Agricultural Associations of the State; pamphlets have been issued and sent broadcast over the country; seeds of well established varieties have been procured from the Agricultural Department at Washington and purchased from other sources, and gratuitously distributed by the Bureau in every civil district in the State. More than one million of silk eggs have been gratuitously distributed to the farmers' wives of the State. Everything has been done that could have been done with the means at the command of the Bureau for the promotion of our agricultural interests.

The number of packages of seed distributed in 1883 and 1884 was 7,268, of which 3,740 were furnished by Hon. G. B. Loring, Commissioner of Agriculture, Washington, D. C., 96 by the Hon. R. D. Darnall, Lake Co., Tenn., and 4,432 purchased. Of silk eggs, 250 packages, containing 1,123,000 were furnished by P. Wallace McKittrick, of Memphis, Tenn.

SPECIAL REPORTS ON WHEAT.

Of the Wheat sent out from the Bureau in the fall of 1883 to be tested in the different counties in the State, but few reports have been received, and are herewith given :

GOLDEN CHAFF.

Mr. I. T. Young, of Shop Spring, Wilson county, says : " From one bushel of Golden Chaff bearded wheat received of you last fall, I have raised and threshed sixteen bushels of good quality. The land was turned in August, and put in good condition the first week in October and drilled, taking a little over an acre. The rest of the field, about nine acres, was treated the same, and drilled to Fultz wheat, making nearly 24 bushels to the acre, or 215 bushels.

" In 1882 the land was in clover, and plowed in August, and harrowed and drilled, and last year, 1883, produced 255 bushels Fultz wheat, $25\frac{1}{2}$ bushels to the acre, and said by some to be damaged by rust between five and ten bushels to the acre, owing to late sowing.

" I expect to try the Golden Chaff again this fall on fresh clover land. The Fultz suits my land better than any other wheat that I have tried yet, being white oak and poplar land."

Mr. Joseph W. Baugh, of Franklin, says : " In regard to the Golden Chaff sent me, I drilled it (on ordinary land manured, at the rate of $1\frac{1}{2}$ bushels per acre ; so you see I had less than an acre of ground. With great care we threshed it, not losing any scarcely, and obtained from the bushel drilled just even (none less, none more) 30 bushels. In appearance it resembles the Silver Chaff, and like the Silver Chaff its straw is too soft ; it is inclined to lean over, and with difficulty we cut it. My German Amber outyields it by five bushels per acre, and stands very firm until harvested. The quality of the Golden Chaff is superior to any wheat ever seen hereabouts. I have shown a sample to several millers, and they pronounce it extra fine. I shall, with what I have, make a test on a larger scale next season, and shall report in full my production."

Mr. M. A. Jared, of Buffalo Valley, Putnam county, says : " I sowed the half bushel of Golden Chaff wheat you sent me, on the 12th of October, 1883, on 70 rods of ground. I sowed it among corn on a hill-side, among clay and limestone rocks where the land

had been in cultivation for 45 years. It was free from rust, and it made $5\frac{1}{2}$ bushels of wheat that weighed $62\frac{1}{2}$ pounds to the bushel, while Reed, Walker and Tappahannock wheat sown in the same field only averaged 8 bushels to the acre. My reason for sowing it on this land was to see how it would suit, as Mr. S. D. Maddox sowed his half bushel on bottom land by the side of Swamp wheat, and his was much better than mine, but I suppose he will report to you." [No report from Mr. Maddox yet. Com.]

Mr. W. C. Warfield, of Sadlersville, Robertson county, says: "You requested me to make a report of the wheat—Golden Chaff—you sent me last fall. The land upon which I sowed it had been in grass for six years, and I worked it in tobacco, and I then plowed it up with a two-horse plow, harrowed nicely, and picked up all tobacco stubbles. I bought 200 pounds of Nashville fertilizer and drilled with it. The drill I used was a borrowed one, and as there was no certain way of gauging it, I got the bushel of wheat on three-quarters of an acre, and also the 200 pounds of fertilizer. I wanted to put it on one and one quarter acre. Well, the wheat grew nicely and stood the cold winter remarkably well. Just before it ripened it took the rust a little in spots, but not enough to damage it seriously. I got from it 31 bushels of fine wheat, but I cut it a little early and it damaged some in shock. I find it badly mixed with bearded and Fultz wheat. I shall sow it again and report to you. We have a wheat here known as the "English Amber," a smooth head wheat, which is the leading wheat for yield. If you would like to supply any one I will send you a bushel. I had a field of 56 acres of it that yielded 1,730 bushels; in fact, the most of my crop was of this wheat. I had 60 acres of Mediterranean. My crop of 335 acres averaged 20 bushels per acre. Can any of your wheat-raising friends beat this?"

Mr. Willoughby Williams, of Neptune, Cheatham county, says: "The bushel of Golden Chaff wheat you sent me through Col. Moore last October, was sown on the 23rd of the same month I received it (October), on one acre of land that had previously been sown to clover, but which had, from some cause, died out. I manured the lot well with stable manure; a couple of loads of leached ashes were also put on the same. Owing to its having been sown so late it did not look green during the whole winter. I did not graze it. On the 18th of April, 1884, it began to look very well,

though it came up scattering, which I attributed to the severe winter having killed it out. It was harvested about the last of June. I put it up in shocks, one dozen bundles in each without caps. It was threshed 26th of July. Yield per acre, $19\frac{1}{2}$ bushels, or, for the one bushel sent me by you, I realized $19\frac{1}{2}$ bushels of as fine wheat as I ever saw. Could sell every bushel of it at a good price. Will sow the entire $19\frac{1}{2}$ bushels this fall; I will then be better prepared to supply my friends with seed. The wheat was cut with an old-fashioned cradle, consequently there was more waste attending it than if it had been saved by a reaper. Will give it a thorough trial next season, and report to you as on the above."

Mr. J. A. Russell, of Gleason, Weakley county, says: "The bushel of Golden Chaff wheat sent me yielded $19\frac{1}{2}$ bushels."

Mr. S. F. Howard, of Crockett, Obion county, says: "I planted the gallon of Golden Chaff bearded wheat you sent me, with a drill, on thirty-six square rods of clover land, about the 15th of October, and harvested it on the 25th of June. The rust damaged it to some extent, but not so much as it did other wheat in the same field. The hail damaged it at least one-third. I threshed it on the 3d July; it made one bushel by measure, the measure being heaped a little, and weighed 65 pounds. I think it will be a very good wheat for this country.

Mr. William Taylor, of Newbern, Dyer county, says: "I sowed the half bushel Golden Chaff bearded wheat you sent me last fall on one-third of an acre of ground, and made $4\frac{1}{2}$ bushels—rather a light yield. I think it rather late for this climate."

Mr. J. L. McDaniel, of Dyer, Gibson county, says: "I sowed the half bushel Golden Chaff bearded wheat on three-fourths of an acre of good clover land. The yield was 12 bushels on the three-fourths acre, or at the rate of 16 bushels per acre. I had May wheat sown on land adjoining it that made a yield of 21 bushels per acre with the same amount sown per acre."

Mr. John Ruch of Belvidere, Franklin county, says: "The half bushel of Golden Chaff wheat you sent me last fall made 12 bushels, sown on a half acre of land. It is a very superior grain. I gave it the same chance as my other wheat. My Fultz wheat averaged 20 bushels per acre."

BOUGHTON.

Mr. Wm. C. Johnson, of Hillsdale, Macon county, says : "The half bushel of Boughton wheat sent me was sown on one acre loose oam land, east hill side, 200 feet above the level of the creek, and made 9 bushels."

Mr. J. M. Meacham, of Pinewood, Hickman county, says : "The wheat (Boughton), grown from the peck sent me last fall, has been threshed, and the yield was 10 bushels. Pretty good for a peck's sowing."

Mr. G. H. Walker, of Juno, Henderson county, says : "I sowed the half bushel of Boughton wheat you sent me, on the 19th of November. It stood the winter better than other other wheat, and made $4\frac{1}{2}$ bushels, or 9 to 1."

Mr. J. F. Huddleston, of Cookeville, says : I was much pleased with the Boughton wheat you sent. From the 29 pounds sowed on ordinary land I threshed 300 pounds."

Mr. C. B. Baker, of Carroll, Madison county, says : "The wheat you sent me last fall (one bushel) was sown on clover land about the 1st of October. The land was broke with a two-horse plow, and cross-plowed with double shovels, before sowing, and dragged with a two-horse harrow with the teeth up, and wheat sown and plowed in with double shovel, and the same made 25 bushels on or about seven-eighths of an acre. It looks like the old Boughton wheat that we raised in East Tennessee some years ago."

Mr. J. G. Woodard of Springfield, says : "The Boughton wheat you sent me to test was sown October 5th, on fresh land that had been cultivated in tobacco. I pulverized the ground thoroughly, and had to sow broadcast on account of stumps. The rust was on it about ten days before ripe. I cut it about the 15th of June; the yield was 18 bushels to the acre—about the same as other wheat that was sown on the same quality of land."

IMPORTED MEDITERRANEAN.

Mr. J. B. David, of Cottage Home, Wilson county, says : "I herewith report the result of the imported Mediterranean wheat you sent me last August. Quantity sown, 2 quarts; kind of soil, good creek bottom clover land; preparation, turned in August,

harrowed and drilled ; date of sowing, October 10 ; growth at first rapid, afterwards not so fast ; yield of grain, one bushel ; quality of grain, good, but slightly rusted."

There were six acres sown in the same field of the Fultz ; the yield about the same, 20 bushels per acre ; also damaged by rust some. The sample of wheat was four days later than the Fultz in ripening.

AGRICULTURAL EDUCATION

should demand the attention of the 44th General Assembly. A law was some time since enacted requiring the principles of scientific agriculture to be taught in our free schools, and the Commissioner of Agriculture, in connection with the Superintendent of Schools was directed to prepare a suitable text-book to be used for that purpose. A text-book was prepared during the terms of the former incumbents of those offices, but I am informed that the requirements of the law are wholly disregarded in the schools.

COMMERCIAL FERTILIZERS.

The necessity of using fertilizers for the purpose of restoring fields which have been exhausted by improvident cultivation, is admitted by all. The farmers of New England and the Atlantic Coast States are to-day, by the judicious application of commercial fertilizers, reaping immense harvests of grain, tobacco and root crops from fields which twenty-five years ago were not worth the cultivating. Much of the worn out land of Tennessee could be thus restored, and made yield large and profitable crops.

The law for the "Inspection and Sale of Fertilizers," enacted in 1883 (See Chapter 73, Acts 1883, pp. 246-249), is defective and should be amended or repealed. I would respectfully suggest that if it be repealed, the following law be enacted :

"SECTION 1. That no manipulated guanos, superphosphates or other commercial fertilizers shall be sold, or offered for sale in this State, until the manufacturer, or person importing the same, shall first obtain a license therefor from the Treasurer of the State, for which shall be paid a privilege tax of \$500 per annum for each separate brand or quality. Any person, corporation or company, who shall violate the provisions of this act, or who shall sell or offer for

sale, any such fertilizer contrary to the provisions above set forth shall be guilty of misdemeanor, and, upon conviction, shall be fined or imprisoned, at the discretion of the Court. And all fertilizers so sold or offered for sale, shall be subject to seizure and condemnation in the same manner as is provided in section 5 of this act for the seizure and condemnation of spurious fertilizers, subject, however, to the discretion of the Commissioner of Agriculture to release the fertilizers so seized and condemned, upon the payment of the license tax and all costs and expenses incurred by the Bureau of Agriculture, Statistics and Mines in such proceeding.

SEC. 2. That whenever any manufacturer of fertilizers shall have paid the license tax of \$500, his or their goods shall not be liable for any further tax, whether by city, town or county.

SEC. 3. Any dealer in fertilizers who may have on hand a quantity not exceeding ten tons when the license for the year expires, shall not be prevented by the provisions of this or any other act from selling the same without further taxes.

SEC. 4. That the Commissioner of Agriculture, Statistics and Mines be authorized and directed to set apart and appropriate annually of the money received from the tax on fertilizers the sum of \$500 for the benefit of the University of Tennessee, to be expended under the direction of the Commissioner of Agriculture, etc.

SEC. 5. That every bag, barrel or other package of such fertilizer as above designated, offered for sale in this State, shall have thereon plainly printed, a label or stamp, a copy of which shall be filed with the Commissioner of Agriculture, Statistics and Mines at or before the shipment of such fertilizer into this State, and which shall be uniformly used, and shall not be changed during the year for which such license is issued; and the said label or stamp shall truly set forth the name, location and trade-mark of the manufacturer; also the chemical composition of the contents of such package, and the real percentage of any of the following ingredients asserted to be present, to-wit: Soluble and precipitated phosphoric acid, soluble potassa, ammonia, or its equivalent in nitrogen, together with the date of its analyzation, and that the privilege tax provided for in section 1 has been paid; and any such fertilizer as shall be ascertained by analysis not to contain the ingredients and percentage set forth as above provided, shall be liable to seizure and condemnation as hereinafter prescribed, and when condemned shall

be sold by the Commissioner of Agriculture, Statistics and Mines for the exclusive use and benefit of the Bureau of Agriculture, Statistics and Mines. The proceeding to condemn the same shall be by civil action in the Circuit Court of the county where the fertilizer is on sale, and in the name of the Commissioner of Agriculture, Statistics and Mines, who shall not be required to give bond for the prosecution of said action. And at or before the summons is issued, the said Commissioner of Agriculture, etc., shall, by his agent, make affidavit before the Clerk of said Court of these facts:

1st. That a license has been obtained for the sale of a fertilizer of a particular brand.

2d. That samples of the same have been analyzed under the authority of the Commissioner, and found to correspond with the label attached to the same.

3d. That the defendant in the summons has in his possession, and on sale, fertilizers of the same name and brand, and bearing a label or stamp representing the analysis made.

4th. That the fertilizers on hand and on sale are spurious and do not in fact contain the ingredients or in proportion represented by the stamp or label on them. Whereupon the Clerk shall issue his order to the Sheriff of the county to seize and hold all the fertilizers in possession of the defendant, labeled or stamped as the affidavit described. And the Sheriff shall seize and hold the fertilizers so seized until ordered to be surrendered by the Judge in term time: unless the defendant shall give bond with justified surety, in double the value of the fertilizers seized, to answer the judgment of the Court, in which case he shall surrender the fertilizer to the defendant and file this bond in the office of the Clerk of the Circuit Court, and thereafter the action shall be prosecuted according to the course of the Court. And if it shall be established in the trial that the fertilizers seized are deficient or inferior to the analysis represented on the stamp or brand, then the plaintiff in said action shall recover judgment on the defendant's bond for the value of the fertilizers seized.

SEC. 6. The Bureau of Agriculture, Statistics and Mines shall have power and authority, at all times, to have collected samples of any commercial fertilizers offered for sale in this State, and have the same analyzed, and such samples shall be taken from at least ten per centum of the lot from which they may be selected.

SEC. 7. It shall be lawful for the Bureau of Agriculture, Statistics and Mines to require the officers, agents, or managers of any railroad or steamboat company, transporting fertilizers in this State, to furnish monthly statements of the quantity of fertilizers, with the name of the consignor or consignee, delivered on their respective lines, at any and all points within this State. And said Bureau is hereby empowered to compel said officers, agents, or managers to submit their books for examination, if found expedient so to do; and any such agents, officers or managers failing or refusing to comply, shall be deemed guilty of misdemeanor."

The Inspector of Fertilizers should be appointed by the Governor of the State.

North Carolina, with a law similar to the above, is realizing an annual revenue therefrom of more than twenty thousand dollars; and I am informed by some of the officials of their Board of Agriculture that the same brands of commercial fertilizers used in that State are sold at the same prices obtained for them in other States.

Since writing the above I have received a letter from John W. W. Glenn, Professor of Agriculture and Director of Experiment Station, University of Tennessee, Knoxville, Tenn., which informs me, and which I take great pleasure in reporting to you, that his report of 1883-4 is now in press, and will be sent to the Forty-fourth General Assembly during this session. * * Referring to commercial fertilizers, he also informs me, "I shall be sorry if it does not reach you in time to be noticed in your report, as it shows a decided improvement in the later fertilizers offered for sale. Indeed, the articles placed on the market have steadily improved from the time the inspection began. This shows clearly the value of the law and the importance of the work done. These reports and the tests made on our farm clearly indicate the value of commercial fertilizers; and if they are properly employed on the farm they pay handsomely. Thus far the inspection has reduced the quantity but improved the quality of the goods sold in Tennessee. The net income to the college from the fee is, as yet, very small—only \$500 or \$600 per annum, probably, for analyses and tests, but this small sum has been admirably applied. Sixty-four samples have been analyzed and about as many tests made on the farm. I beg you to call attention to the large amount of work done at the Station since

the last meeting of the General Assembly. One large report and three or four bulletins, all issued in the last twelve months, will be sent to Senator Logan and by him placed on the desks of the members. * * * * *

In the "Spirit of the Farm" some numbers back, I noticed a report of some resolutions, said to have been adopted at a meeting of farmers in Nashville. Among those resolutions was one to the effect 'that the State Agricultural College ought to be moved to the Hermitage.' * * * * * I beg you will urge upon our Middle Tennessee friends, if any of them favor that move—any considerable number, I mean—not to act hastily in a matter so important. If the College were moved under the most favorable influences, it would take twenty or thirty years to build up an institution at the Hermitage anything near equal to the one which we now have. It would cost the State an immense amount to supply buildings and other appliances. Those would be the least of the troubles which would follow such a policy. Most unfortunately for us, I think, Nature has drawn two lines across our State, dividing it into three sections. The proposed policy would groove those lines very deeply and broadly. It is now a common opinion, which has been voiced in my hearing many times, that Middle Tennessee insists on having all public institutions located in that part of the State, and all public moneys expended there. Whether sustained or not (probably not), the assertion is made, and any policy which will give such coloring to it will be most unfortunate. It will revive again in great vigor that old sectional feeling which I think now is dying out. Tennessee wholly united is a grand State, among the first in the Union, but split into sections over questions of taxation and patronage, she would fall far back from the front rank. All parts of the State are sustaining the College here well; and the farmers of East Tennessee are very proud of it. Why can we not have three Experiment Stations, one here, one at the Hermitage, and one in West Tennessee? Germany has thirty odd, and what an agricultural country! Tennessee could well afford to give \$15,000 per annum to each of the three Stations. She needs the experimental work, and young farmers could take practical and even theoretical lessons at each of these Stations, though it be not called a college. Scarcely any soils.

have been analyzed in Tennessee, and one Station cannot make half the tests needed. This would be a glorious move for agriculture."

* * * * *

I deem it due to Professor Glenn to quote thus extensively from his most valuable letter to me, under date January 6, 1885, and beg to inform you that a bulletin of analyses of all fertilizers referred to by him will, in due season, be placed on the desks of the members of the General Assembly.

FARM LABOR.

The industrial revolution of this age, which has created new social and material systems, has assisted less the farm laborer than it has the wages laborer of any other important industry. The farm itself, in its relation to labor, has suffered a positive loss. Mechanism has shortened the hours of labor, and in its centres has created a social life attractive to labor. But expansion of labor-saving machinery on the farm has forced the laborer to seek other employment. The more aspiring farm-laborer has sought the schools, libraries and social opportunities of the town. The corn-planter has replaced 10 men, the mower 5, the reaper 10 men, and so on for other farm operations. The wonderful strides of agriculture are revealed in the annual production of farm mechanism, amounting to more than \$68,000,000 for 1880. Agriculture has been no laggard; it has measured the advance of social and industrial progress through the labor its better methods have given to the arts. Within a life-time it has given one-half its former ratio of workers to other callings. Heartless, this farm mechanism has sent to the town the best farm labor to occupy positions of minor trusts to satisfy its gregarious instincts. This impulse has been aided by the uncertainty of the tenure of farm labor and its certain long hours of labor. Seven months of sun-to-sun labor followed by five months of intermittent and uncertain labor, with its saloon companionships in hours of idleness, has been demoralizing to farm labor. Such laborer, boarded in the family of the farmer, is a burden to the wife and demoralizing to the children. The old polity has been wrecked, and the new, which is fast approaching, will secure the best labor of the day; the cottage home for the laborer on the farm, and for his family, with a garden, a cow, pig, newspaper and steady employment by the year. These bind labor to the

farm and to its interests. Experience teaches that good homes, regular labor and stated hours will secure the best of labor, and that they also induce conservatism in the laborer. Mechanism has rendered the barbarism of extreme long days of labor peculiar to the farm unnecessary.

The diversity of farm operations requires more brain and executive ability of the farm laborer than any other industry; hence education of the farm laborer is of more importance than the education of any other class of laborers. A comparison of northern with southern labor shows this. Ownership is the parent of all broad, permanent farm improvement. Grand results come only from the quickened perception and energy that ownership gives. Tennessee needs more farms and fewer plantations, and also needs more of intensive and less of extensive farming. The sessions of 1883 and 1884 have not only been most favorable to agriculture in Tennessee, but also to the agriculture of the old world, Asia, Europe and all the States of this Union.

In our own State the farmers have much to be thankful for. We have had abundant harvests; the crops of corn, wheat, oats, hay and potatoes have rarely if ever been excelled in the annals of our agriculture; live stock has been in marketable condition throughout the entire season, and has commanded remunerating prices; pasturage everywhere has been most abundant; our farmers throughout the length and breadth of the State have adopted new methods in husbandry, and are keeping abreast with the times; more of their lands are being sown to clover—the grasses—and devoted to the cereals, and less to cotton and tobacco, consequently it is a rare thing to find a Tennessee farmer now laboring under the oppression of bond and mortgage and a usurious interest. Lands generally have improved in value; those that might have been purchased two years ago at \$8 to \$12 per acre cannot be obtained now at less than \$10 to \$15 per acre.

THE DAIRY INTEREST.

Tennessee, situated midway between the tropics and the frigid zone, offers to the dairyman the finest field of profitable operation known to this branch of agriculture. There are but very few acres in the State—aggregating more than 25,000,000 acres of land—upon which the native or the cultivated grasses do not luxuriate.

The clovers in all their varieties, as also the poas and fescues, thrive astonishingly well in our genial climate and upon our fruitful soil. There is no better soil or climate in the world than that offered by Tennessee to the dairyman, and why the farmers of the State should persist in raising a surplus product of corn and wheat, which rarely commands more than one to one and a half cents per pound in market, instead of devoting their attention to dairy products, I cannot explain. With our pure water, genial climate and productive soil, adapted to all of the grasses, Tennessee should be among the foremost States in the Union in the manufacture of butter and cheese. But two creameries have been established in the State the past year, Erwin, Jones & Co., of this city—the pioneers—and the Stone River Creamery Company, Murfresboro, Tenn.

Whilst we have devoted largely of our time and talent to the promotion of agriculture, we have not been unmindful of the vast mineral wealth possessed by Tennessee in her unfathomed stores of iron, coal, copper, manganese, fire clay, ochre, potter's clay, marble and zinc, and have used every means at our command for their development.

COAL MINES.

Nature, always complemental in her resources, has with a beneficent hand tendered to our people treasures never dreamed of by our forefathers. Coal, the king of commerce, covers 5,100 square miles, or 3,264,000 acres, all of which has at least one coal-bearing seam, a large proportion more than two, and a considerable area five or more. The Tennessee coal field belongs to that geological division known as the Appalachian, and is either bituminous or semi-bituminous. The largest mining operations in Tennessee are those of—

The Tennessee Coal, Iron and Railroad Company, at Tracy City. This company has a capital of \$3,000,000, and it employs about 2,000 laborers. The output from January, 1883, to November 1, 1884, was 6,279,350 bushels coal, and 9,286,450 bushels coke. J. C. Warner, Nashville, Tenn., Pres't; A. M. Shook, Tracy City, Gen. Manager; James Bowron, Nashville, Sec'y and Treasurer.

Etna Coal and Mining Company, Whiteside, Marion county, Tennessee. Wm. Morrow, Nashville, Pres't; D. B. Pillsbury, Manager; J. T. Hill, Secretary, Whiteside, Tenn. Output from August 1, 1883, to November 1, 1884: coal, 1,030,146 bush.; coke, 533,436 bush.

Briar Hill Coal Company, property of the Hellenwood Coal Company, Hellenwood, Scott county, Tennessee. The output from August 1 to Nov. 1, 1884, was 2,000 tons. E. J. Williams, Manager, and Rus. E. Williams, Sec'y and Treas., Hellenwood, Tenn.

Glen Mary Coal and Coke Company, Glen Mary, Scott county, Tenn. G. W. Darnall, Pres't and Treas., and L. P. Shaw, Sec'y, Lexington, Ky.; Jno. H. Clark, Supt., Glen Mary, Tenn. The output not reported.

Oakdale Iron, Coal and Transportation Company, Jenks, Roane county, Tennessee. Chas. A. Bulkley, New York, Pres't; D. A. Carpenter, Knoxville, Vice-Pres't; E. F. Wiley, Knoxville, Tenn., Sec'y and Treas. Output not reported.

Eureka Coal Company, Oliver Springs, P. O., Anderson county, Tenn. Thos. J. Thomas, Pres't; G. W. Smith, Sec'y; T. A. Jenkins, Supt.; Oliver Springs, Tenn. Output not reported.

Winter's Gap Coal Company. Oliver Springs P. O., Anderson county, Tenn. C. W. Bartlett, Pres't; Knoxville, Tenn.; Thos. Phillips, Sec'y and Supt., Oliver Springs; — Hogle, Treas. and Manager, Oliver Springs. Output not reported.

Poplar Creek Coal Company, Oliver Springs, Anderson county, Tenn.; E. F. Wiley, Knoxville, Pres't; W. J. Hornsby, Sec'y and Treas. Commenced shipping about August 1, 1884, and to Nov. 1, 1884, had shipped about 300 tons.

Oliver Coal Company, Oliver Springs, Tenn. Commenced operations Oct. 1, 1884. Output not reported. Jos. Richards & Sons, Lessees and managers.

Mount Carbon Coal Company, Oliver Springs, Anderson county, Tenn. Names of officers and output, not reported.

Roane Iron Company, Rockwood, Tenn. Output from Jan. 1, 1883, to Nov. 1, 1884, of coal, 185,252 tons, and of coke, 4,104,-132 bushels. H. S. Chamberlain, Pres't; H. C. Evans, Sec'y, Chattanooga, Tenn.; M. W. Duncan, Sup't, Rockwood, Tenn.

Dayton Coal and Iron Company, limited, Dayton, Rhea county, Tenn. John H. Ferguson, Managing Director; Percival Johnson, Cashier, Dayton, Tenn. Output from Jan. 1, 1883 to Nov. 1, 1884, 4,989 bush. coal, 90,159 bush. coke.

Walden Ridge Coal Company, Sale Creek P. O., Hamilton county, Tennessee. M. H. Clift, Pres't, Chattanooga; J. T. Williams, Treas., Chattanooga; J. W. Clift, Sec'y, Soddy. The output for

1883 to Nov. 1, 1884, was 15,503 tons of coal and 404,949 bush. coke.

The Soddy Coal Company, Soddy, Hamilton county, Tenn. M. H. Clift, Pres't.; J. T. Williams, Chattanooga, Treas. and Gen. Manager; J. W. Clift, Soddy, Sec'y; A. Lloyd, Gen. Supt., Soddy, Tenn. Output for 1883 to Nov. 1, 1884, 96,000 tons of coal, of which 32,000 tons were converted into coke.

Daisy Coal Mining Company, Daisy, Hamilton county, Tenn. James C. Aydelotte, Pres't; C. W. Davidson, Sec'y, Tullahoma, Tenn.; Thos. Parks, Vice-Pres't, and W. H. McLemore, Treas., Daisy, Tenn. Output, 30,000 tons per annum.

Coal Creek and New River Coal Company, Coal Creek, Tenn. Name of the officers and output not reported.

H. B. and Joel Bowling Mines, Coal Creek, Tenn. H. B. and Joel Bowling, lessees and managers. Output not reported.

Anderson County Coal Company. Names of officers and output not reported.

Coal Creek Mining Company, Coal Creek, Anderson county, Tenn. Output of the mines of this company, from January 1, 1883, to Nov. 1, 1884, 150,000 tons. J. H. Heald, Pres't, Knoxville, Tenn.; E. C. Locke, Sec'y and Treas., Knoxville, Tenn.

Knoxville Iron Company, lessees of the Coal Creek Mining and Manufacturing Company's mines, Coal Creek, Tenn. Officers: W. R. Tuttle, Knoxville, Pres't; W. S. Mead, Knoxville, Sec'y. Output from Jan. 1, 1883, to Nov. 1, 1884, 204,978 tons.

Jellico Mountain Coal, Coke and Transportation Company, Newcomb, Campbell county, Tenn. Sam'l L. Woolridge, Lexington, Ky., Pres't; Chas. F. Johnson, Vice-Pres't, Louisville, Ky.; Thos. Mitchell, Lexington, Ky., Treas.; Edgar C. Maxham, Newcomb, Tenn., Supt. and Gen. Manager. Output from August, 1884, to Nov. 1, 1884, 74,794 tons.

Standard Coal and Coke Company, Newcomb, Campbell county, Tenn. E. E. McCroskey, Knoxville, Tenn., Pres't, and Treas.; J. F. McClure, Newcomb, Tenn., Vice-Pres't, and Gen. Man.; W. W. Woodruff, Knoxville, Tenn., Sec'y. Output from Jan. 1, 1884, to Nov. 1, 1884, 39,239 tons of coal.

Thus it will be seen that we have twenty-three mines of coal in Tennessee now being worked, and that coal mining has become an important factor in the industries of our State, and offers induce-

ments unexcelled to workingmen and capitalists who desire to join hands with us in the development of these immense mineral resources. The output of coal from fifteen mines in Tennessee in 1882 was 850,000 tons, and had the operators of the twenty-three mines now being worked answered our enquiries, we have no doubt we could have shown a large increase within the past two years, notwithstanding the great financial depression. "The consumption of coal is a fair measure of the industrial activities of a people."

Coal mining in Tennessee has reached a point where the strong arm of the law is imperatively demanded for the protection of the lives of the miners who are engaged in this industry. The law passed by the General Assembly of Tennessee (See Acts 1881, chapter 70, pp. 234 to 243 incl.), is not adapted to coal mining in Tennessee, where drifts and tunnels only are in use. It should therefore be amended or repealed. If repealed, I would respectfully suggest the enactment of a law similar to that passed by the legislature of West Virginia, which is concise, and so simple that "he who runs may read" and understand. Humanity demands that this should be done at the earliest practicable moment. I furthermore respectfully suggest that the Inspector of Mines be appointed by the Governor, and that he be allowed a salary of not exceeding \$1,000 per annum and his necessary traveling expenses.

IRON ORES AND OTHER MINERALS.

In iron ores Tennessee is greatly favored, and often coal and iron ore are to be found within gunshot of each other, with abundant limestone in close proximity. The black magnetic, hematite and limonite obtain at intervals throughout East Tennessee. West of Nashville, in the counties of Stewart, Montgomery, Houston, Dickson, Humphreys, Perry, Hickman, Lewis, Wayne, and Lawrence, limonite, a hydrate ore with yellow powder, extends over an area some forty miles wide, from Kentucky to Alabama, which absolutely groans with rich and heavy deposits, many of them untouched. This was the most extensive field for the making of charcoal iron in ante-bellum days. As many as eleven furnaces in those days were in full blast in the single county of Montgomery, but to-day there are but three running in this rich mineral belt: The Warner,

Warner P. O., Hickman county, Tennessee, with an output of 45 tons charcoal iron ; the Cumberland furnace, Dickson County, an output of some 15 tons, and the Lagrange, at Stribling, Stewart County, Tennessee, with an output of 45 tons daily. The Bear Spring, Cumberland Iron Works, is at present out of blast.

There is a great promise of a resumption of operations of the Etna furnace, Hickman county, and of establishing the "Eldorado" a new furnace, which will be located at the Jerry ore banks, Hickman county, Tennessee. These valuable properties are now in the hands of some of our most enterprising capitalists who are preparing to make the plants as above stated. The Cowan furnace, Cowan, Tennessee, and the South Pittsburg (two stacks, one only in blast), are in active operation, and turning out 180 tons pig iron per day. The Chattanooga Iron Company's furnace, Chattanooga, Tennessee, turned out 13,000 tons during 1883. We have no report of their output for 1884 ; neither have we a report from the Citico furnace, a new and one of the most valuable furnaces in the State, situated also at Chattanooga.

The Roane Iron Company, Rockwood, Tennessee, has made no report of their output. This property is operated by very skillful people and has proven very remunerative to the stockholders. The Oakdale, Jenks, Tennessee, is out of blast, and being greatly improved as to its machinery, etc. Sir Titus Salt and other English capitalists are erecting two furnaces at Dayton, Rhea county, aggregated capacity, 200 tons daily. This is known as the Dayton Coal and Iron Company, limited.

The Napier Furnace Company, Chief, Lawrence county, cold blast, is not in operation, having blown out for repairs. In 1882 Tennessee produced 137,602 tons. This amount could easily be quadrupled, but I mention it not to parade the possibilities but the probabilities of our State in the near future. Wise legislation and competitive lines of transportation into and across the iron belts of Tennessee would go far toward determining this as the iron center of the United States. We are already shipping our pig iron to Boston and Philadelphia, and notwithstanding the difference in transportation against us in the proportion, \$1.13 per ton to \$4.35 per ton, we are making quick if not remunerative sales.

The Nashville & Florence Railroad, running from Columbia to

Lawrenceburg, and the Nashville & Tuscaloosa Railroad, narrow gauge, running from Dickson to Etna furnace, Hickman county, have opened up some of the most valuable iron ore lands known in the State. It will be a great misfortune for Tennessee if both these roads are not completed. The best interests of the State demand their completion.

FACILITIES FOR CHEAP TRANSPORTATION

are greatly needed, not only throughout the Western iron belt, but also throughout the Dyestone region of East Tennessee and the coal fields of the Cumberland plateau. Very little of the iron ore and comparatively but little of the coal of Tennessee have ever been exported into other States. The opportunities offered the owners of these coal and ore banks by cheap transportation would invite capital and enterprise where it is much needed, and also where it would be highly appreciated. There are indeed but very few of the citizens of Tennessee who know the extent of our iron interest. We possess enough of this raw material to supply the wants of the United States for more than 100 years.

COPPER.

We are pleased to report that the copper mines known as the Union Consolidated Company, Ducktown, Polk County, have been purchased by Messrs. Williams & Co., New York City, who are preparing to place the works in active operation.

ZINC

is being successfully mined in the counties of Jefferson, Union, Knox and Claiborne, which is shipped to the smelting works located at Clinton and manufactured into spelter of superior quality. A very rich deposit of zinc ore has been recently discovered near Union Depot, Sullivan County, Tennessee, which we trust will induce the establishment of another smelting works at either Bristol or Johnson City.

MARBLE.

The white and variegated marbles of Hawkins, Knox, Blount and Bradley counties, East Tennessee, have become quite cele-

brated, and are said to surpass those of all the States combined, and even those of Italy. Discoveries of variegated, gray and brown marbles have recently been made in Franklin, Lincoln, Lawrence and Maury counties, Middle Tennessee; and also in Decatur and Henry counties, West Tennessee. Those engaged in quarrying and preparing this structural material for market, are finding it quite remunerative. Some of the East Tennessee marble commands \$5 per cubic foot in market. It is a great misfortune that men of enterprise and capital cannot be found to develop the marble interest of Middle and West Tennessee as has been done in East Tennessee.

OCHRE.

A very rich deposit of ochre has been discovered about one and one-half miles from Ripley, Lauderdale county, Tennessee, which compares favorably with the best imported goods in this line. There would be a mine of wealth flowing from this if capitalists would take hold of and develop it. Cheap transportation is offered for its export over the line of the Chesapeake, Ohio & Southwestern Railroad.

COMMERCIAL TIMBER.

There is no State in the Union that possesses a larger area devoted to dense forests of hardwood, in proportion to aggregated area of the State, than does Tennessee. Nashville, the capital city of the State, has the credit of exporting more hardwood than any city in the Union. There are a dozen other cities in the State that, with enterprise and capital properly invested, might excel Nashville in this branch of industry. The Northern and Eastern States are being fast denuded of their forests. Tennesseans should develop their timber interest by the building of more railroads and tramways. The cottonwood found in great abundance in the bottom lands of West Tennessee offers an inviting field to paper pulp manufacturers, and we hope at an early day to record the establishment of many of these mills in that section. White poplar is now commanding \$8 per cord for the above purpose in the State of Maine. Cottonwood is more easily worked, and makes a better paper.

The resources of Tennessee are absolutely illimitable. Fire-clay,

potter's-clay, gypsum and manganese, all are found within our borders. Nothing prevents Tennessee from taking a position among the foremost States of this Union but a want of enterprise among her own people—an enterprise that will not only advertise our possibilities to the people of the world, but also that will take hold of and develop them into living probabilities. We need rolling mills and foundries for converting our surplus pig iron into merchantable products. We need cotton and woolen factories and shops for the manufacturing of agricultural implements. The Old Shore line known to our geologists, which in Tennessee is co-incident with the Tennessee river, sweeping around from west to the southeast through Alabama, Georgia, the Carolinas and Virginia is to become the manufacturing center of the United States of America. Nature has arranged this, and other forces are now moving toward this consummation.

SMALL FRUITS

have become an important factor in the agricultural economy of the State. We take great pleasure in reporting that in West Tennessee alone there are more than 1,200 acres devoted to the cultivation of strawberries, raspberries, blackberries and grapes, and this industry also obtains in East Tennessee. Historic Missionary Ridge boasts of several hundred acres devoted to this pleasant and profitable industry. It is asserted by Mr. Rosamond, of Gadsden, Tennessee, that for a series of six years he has averaged a net revenue of \$106 per acre for his crop of strawberries alone. In 1883, the net income to the horticulturists within five miles of Gadsden, from berries alone, exceeded \$99,000.

EXPOSITIONS.

This is an age of "object lessons," and the State that avails itself of this method of advertising its resources and products will lead in the matter of determining capital and skilled labor within its borders. As per your orders, we made an exhibit of the natural resources and agricultural products of Tennessee at the Southern Exposition, Louisville, Kentucky, and at the Mechanics' Institute Fair, Boston, Massachusetts, in September and October of 1883. Having a very limited amount of means at our command we could

not have accomplished what we did in this important work but for the courtesy of the railroad companies of this State, all of whom passed the articles for exhibit in Tennessee space to both these exhibitions *free of charge*. We therefore most respectfully return our thanks for these favors, especially to the officers of the Louisville, Nashville & Great Southern Railroad Company, Chicago, St. Louis & New Orleans Railroad Company, Nashville, Chattanooga & St. Louis Railway Company, East Tennessee, Virginia & Georgia Railroad Company, Cincinnati, New Orleans & Texas Pacific Railway Company, Chesapeake, Ohio & Southwestern Railroad Company, Rogersville & Jefferson Railroad Company, Tennessee Coal, Iron and Railroad Company, and to Col. T. F. Matson, Superintendent and Engineer of the Tennessee & Western North Carolina Railroad Company. These gentlemen, including the officers of the Mobile & Ohio and the Louisville, Memphis & New Orleans Railroad Companies, again came to my aid in the matter of *free transportation* upon all articles representing the natural resources and agricultural products of the State intended for the World's Exposition, New Orleans, Louisiana, the current season, and but for this timely aid and substantial courtesy we could not have made an exhibit.

The expense incurred in making the exhibits at Louisville and Boston in 1883 was something less than \$4,600. The profit derived by the State from these exhibits amounts to more than \$1,000,000 capital already invested in the lands of this State and improvements, such as furnaces, saw mills and manufacturing establishments, besides more than 1,000 families of farmers and skilled laborers. If those exhibitions resulted in this great good for the State, what may we not expect from a complete representation of the State's resources and agricultural products at the greatest of all the world's fairs—the Industrial and Cotton Centennial Exposition now being held at New Orleans, which is in fact, a

WORLD'S EXPOSITION ;

a friendly challenge from the growing South to all countries upon the globe, to show equal fertility of soil, equal mineral lands, equal forests and equal climate, or equal advantages for manufacturing industries. Give us but a microcosm of Tennessee at this, the

greatest of world's fairs, and " we will turn on the light " and therewith combat the misapprehensions and the misrepresentations that have gone abroad throughout the land regarding the character of our people and the fertility of our soil.

We have had enough of destructive civilization ; let Tennessee enter the lists in this arena of peace where nations must pass judgment, and if it be true that we are behind the progressive spirit of the age, which has made the west one vast harvest field, and which has filled the air with the busy hum of a thousand industries, we can return home the better prepared for developing a

CONSTRUCTIVE PHILOSOPHY

in our political economy, which will open up our 5,100 square miles of coal measures ; an economy which will tunnel our mountains and bring forth their inexhaustible treasures of iron, copper, zinc, fire-clay, marble and granite ; which will probe our dense forests with tram and railways ; which will harness our cascades and waterfalls, erect furnaces, foundries, rolling mills and build railroads and steamboats. This can be accomplished at small expense to the State.

We have already a nucleus upon Tennessee space at New Orleans for an exhibit that will reflect credit upon our State, but it will require

TEN THOUSAND DOLLARS

to complete this exhibit. We do not think it can be done for less. Other States less favored than Tennessee have given to this enterprise, notably, Texas, \$30,000, to which her private citizens added \$45,000 ; Ohio, \$30,000 ; North Carolina, \$30,000 ; Louisiana, \$25,000 ; Mississippi, 12,500, to which her people added \$10,000, and so on throughout the lists of States, except Vermont, which appropriated only \$8,500.

OVER PRODUCTION.

The governments of the Old World, as also the States of this Union, are suffering from over production. The grain markets are glutted and factories and furnaces by the hundreds have stopped or run upon half time. This Exposition at New Orleans will pronounce the "*open sesame*" to the Mexican, Central American and the South American Republics for the surplus products of our mills

and factories. Hitherto only 2 per cent. of the foreign goods imported into these States have gone from the United States.

LAWS FOR THE ADVANCEMENT OF AGRICULTURE.

A convention of the leading farmers of the State was held in Nashville Dec. 4, 1884, and the following resolutions were passed, and we were respectfully requested to direct your attention to the same with the request that you bring to the notice of the next Legislature in your message to that honorable body, to-wit :

" Resolved, That the law of trespass be changed so that taking timber of commercial value from the land of another, or taking growing crops or fruits, be made a felony.

" Resolved, That the propriety of a stock law for certain counties be considered, and in that connection that depredating stock be held for damages.

" Resolved, That a barbed-wire fence of seven wires and four feet high be a lawful fence.

" Resolved, That some law for the protection of sheep from dogs is required.

" Resolved, That a law for preventing diseased cattle being brought into the State at any time, and those cattle capable of transmitting disease from infected districts from the 1st of March to the 1st of November.

" Resolved, That a law similar to the New York law in regard to oleomargarine, butterine and sucine be enacted.

" Resolved, That an appropriation of \$1,500 be made for increasing signal service facilities.

" Resolved, That a law requiring tax-assessors to take statistics of live stock, agricultural and industrial products on blanks to be furnished by the Commissioner of Agriculture.

" Resolved, That a law for the quieting of land titles be enacted.

" Resolved, That the Agricultural College be removed from Knoxville to the Hermitage."

IMMIGRATION.

Civilization is a great equalizer ; whether or not the philosophies of men admit it, the conglomerate elements of the living world

arrange themselves like undissolved fluids in the order of their specific gravities.

In no phase of civilization is its equalizing tendency more significantly displayed than in the distribution and fixation of the population of the world.

The influences which determine the development of a country through the influx of people are manifold and varied. Time was when the shores of our own beloved country, unknown as it then was in all its boundless wealth and illimitable resources, offered an asylum and a refuge in its luxuriant wilds to those who sought only safety from persecution and "*freedom to worship God.*" And when political oppression succeeded religious intolerance in the march of ages, the tide of immigration to the land of the free and the home of the brave received a new and grander impulse. Later on the sovereigns of Western Europe came to regard America as Russia did Siberia—the cesspool for their criminals and the dumping ground for their rebellious and banished subjects. But when the wonderful possibilities of our country under a system of government unequaled in its encouragement of individual enterprise and unsurpassed in its support of its individual interests, rose up before the world like Aladdin's magic palace before Persia's astonished morn, new impulses were brought into play and new influences lured the crowded population of Europe and of Asia to the soil of America, where there was bread enough and to spare for men of honest toil, and boundless wealth for those whose capital and energy could find too little room in the overtaxed resources of the Old World.

To-day, when religious tolerance is the order of all civilized government, when political oppression is largely tempered by the suffrages of the people, even in the oldest and most autocratic governments of the world, it is clear that the great stimulus to emigration is now the search for wealth and independence in the resources of an undeveloped land. And it is this which commands our serious attention, as it is soon to become the most important factor in the great problem of American civilization. Heretofore the shrewd capitalists of the North and East have taken time by the forelock, and by their well ordered systems they have turned the tide of emigration into their centers of manufacture and other industrial fields, populating their cities and their forests and their plains, and

giving them a balance of power in the sway of government and the control of wealth never otherwise to be obtained. The old aristocratic tendencies of the South, while they developed a race of noblemen, have stood very much in the path of industrial progress.

Social culture has, in the South, crystalized about it all those elements which tend to materialize a country and develop its wealth. Our "peculiar institution," as it has been called, had developed in us a carelessness or an apathy toward the development of other resources then apparently so little needed to fill out the complement of Southern political economy. But the cataclysm of civil war, disrupting our inherited customs, overthrowing our cherished institutions, and forever destroying the policy of our people, if I may so term it, has brought us face to face with the grand necessity for the utilization of our undeveloped resources, if we expect to keep pace with the march of civilization and hold our place as factors in its mighty problem.

Throughout the old world the idea prevails even among the educated, that south of Mason and Dixon's line there is naught but cotton crested fields belted by dismal swamps and choked with malaria—a land that denies ingress to all but the hot-blooded Southerner and the swarthy African. Whether this idea has been disseminated with purpose or not, it is for us to demonstrate its fallacy and make known to the world the inexhaustible treasures of our soil, and the perfect congeniality of our clime with any nation or kindred, or people, or tongue within the limits of the civilized world.

The tendency of emigration to follow isothermal lines has done much to determine the settlement of Scandinavians and other thrifty people of Northern Europe into the colder regions of America, while those of the South who emigrate in fewer numbers have been retained in the Northern and in the Eastern States, by the extraordinary facilities for earning a livelihood offered by those States to immigrants of every class.

What emigrant from the old world thinks of reaching any point of destination except through Castle Garden? And with what avidity they are seized upon by those who would utilize their labor and fill their own coffers with the result of their thrift and industrial skill! It is the purpose of our Bureau to devise those measures which will place us on an equal footing with the North and

the East in the interest of American immigration. Our ports of entry, New Orleans, Norfolk, etc., are to be made points of destiny for the emigrant, and the wonderful resources of our own Southland are to be brought out in prominent contrast with the already crowded centers of the North and East, and the less genial climate and productive soil of those sections which hitherto have laid the largest claim upon foreign immigration.

Let us look into this matter a little more closely. What are the occupations of the *bourgeois*, *burgher* or peasantry of Europe? The laboring classes of Ireland, from which our country has ever drawn large draughts of population, seem born to the garden and the dairy in agricultural pursuits, to arms in time of war, and to eloquence in their defense of this land of freedom and liberty.

The German emigrants, under better advantages of social and intellectual culture, are more varied in their intellectual capacities. Among them you can find intelligent farmers, skilful mechanics, practical engineers, experienced stock breeders and artists in every department of practical and cultured life. In short, the German Empire offers to the world a people better prepared to utilize all the resources of a country than history has ever known, and the stream of German emigration to America is constant and vast.

The Scandinavian peasantry are born farmers—farmers from instinct—and for industry, sobriety, economy and general intelligence are not surpassed by any class or nationality seeking homes in free America.

Shall we of Tennessee lose all this? Look at the vast area of unoccupied land—more than 16,000,000 acres—thirsting for culture; sufficient, if properly cultivated in small farms like those of France, to sustain a population of 6,000,000 of people.

The very vastness of our resources has made us indifferent to their development. The knowledge of wealth is too often the paralysis of industry.

But we of Tennessee are sadly at a disadvantage. Of all the emigrants that turn their faces to America, as I have before intimated, there are but few who expect to enter America by any other channel than Castle Garden. Can we wonder then that Tennessee has not received the benefit of immigration?

These isothermal lines of which our Northern brethren talk so learnedly and so persistently, that many of them actually have come

to accept this chimerical fancy as the living truth—these “*isothermal lines*” have built up the cities of the Northwest, and made its bleak, cold wilderness blossom as the rose.

The creameries of New York, Pennsylvania, Ohio and Iowa, the great breweries of the East and the West, are almost exclusively the result of foreign labor. The same may be said of their great forges, foundries, rolling mills, glass works and furniture factories. But does anyone who knows aught of the climate and soil of the Southern States dare to say that all this could not be accomplished here? The cry has gone up against us that we breathe an atmosphere of death, that the vampire of infection hangs ever over us, and sucks the life-blood from the channels of industry and trade. Immigrants are imposed upon by corrupt agents representing the railway and other real estate corporations of the great and unfathomable Northwest, a majority of whom have been made opulent in public domain at the expense of the general government, and these agents often display maps of the United States, with the entire list of the Southern States marked in Ethiopian darkness, with here and there a skull and cross-bones labeled *Yellow Fever District—Famine and Pestilence*. The cold and ice-bound regions of the Northwest, Dakota, for example, if their land happens to lie in that State, is portrayed in roseate hues, with deeper red lines of the etherial railways they represent, permeating their Eden and Eldorado. They, poor fellows, are told to follow these bright lines, follow the latitude from which they are about to emigrate and all will be well. There is no one there to tell them that mere latitude does not determine climate, and that the same line of latitude upon the map belts a variety of climes, differing as much from one another as do the varying seasons of the year.

Even so prominent a political economist as Alexander Delmar will persist in promulgating this specious fallacy. In a learned article on American Immigration, he writes as follows:

“Immigration has always been encouraged by the Federal and State Governments of this country, and by many of the latter the inducements held out to the settlers are very attractive. The Federal Homestead Act of May 20, 1862, however, continues to remain the most substantial provision of this sort. It secures to every actual settler—the head of a family, 160 acres of public lands, substantially gratis, in absolute fee simple. A fact likely to prove

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of considerable importance to the future history of this country, is the disposition of migrators to confine themselves to isothermal lines. Our immigrants from the United Kingdom and Germany will be found settled mainly in the same latitudes they left, viz.: On the Ohio, Northern Mississippi and Missouri rivers and their affluents, and on the shores of the great lakes. The Scandinavians settle in the most northern States. The Southern States are almost destitute of foreign population, migrators from Spain and Italy going chiefly to South America. This may be due to language or religion, but is mainly attributable to climate and the similarity of agricultural productions, the staples of our Southern States, cotton and tobacco, being unfamiliar to the peasants of Southern Europe. These facts would indicate a serious diminution of immigration whenever the causes that now superinduce it from Northern Europe to this country shall cease to prevail."

And yet this is in the face of the Census, which shows that the immigrants, consisting mainly of farmers and farm laborers, healthy and in the prime of life, die much faster than the native population where the isothermal theory is applied, like a procrustean bed to determine the locality of settlement. I have given much thought to this subject of late years with large opportunities for investigation, and I fail to find that even the hardy Norsemen of Scandinavian find a more healthful and congenial clime along the icy lakes of the North than by the magnolia-bordered gulf of the Sunny South, and the same may be said of those from other lands, who have sought and found healthful homes among us. Sanitary science is fast eliminating epidemic disease from all quarters of the civilized world where once it was wont to lurk, while at all other times than during localized epidemics the health of the South is remarkable, and *its death rate singularly low in comparison with that of the North.*

The unsettled political relations of the South have been urged against us in determining the settlement of emigrants, but this has come to be regarded even in the North by sensible men as merely the trick of politicians, without any foundation in fact whatever. Our people, though fierce in war, are mild in peace. Throughout the length and breadth of the civilized universe no people can be found who would have fallen so heartily into the grand purposes of the general government, when the issues which once alienated them became dead letters in their political history.

Partisans to the contrary, notwithstanding, the people of the South are a peace-loving, law-abiding and proverbially hospitable people, and the political freedom and civil liberty of the immigrant will be as sacredly preserved to him in any quarter of our land as beneath the great white dome of Liberty itself.

And then again, with the skilled laborers from the crowded centers of England, France and Germany, what is to prevent the manufacture of goods from cotton and from wool right upon the fields of their production. With a right system of Southern immigration, with proper inducements held out for settlement among us, the day is not far distant when the smoke of the foundry, the factory and the cotton-gin will go up together as incense to the heaven that has blessed us with such illimitable and varied resources of industrial wealth.

An erroneous impression seems to have prevailed in the South that emigrants are all outcasts, that no one would leave his home for residence in a foreign land, but an exile, or one under the ban of social, political or civil ostracism. Ah! it is difficult, indeed, for our Southern people, with their broad acres of rich and productive land, it is difficult for them to conceive of the want, the penury, the abject poverty of the European laborer. Skilled as he generally is in the department of life to which he has been called, the overcrowded thoroughfares can give him in return for his labor but little else than his daily bread and a fire to shelter him from an ungenial clime. It is scarcely credible to a Southern planter whose acres of black prairie soil is almost bursting with pregnant wealth, it is hard for him to believe that within a few square yards of old and worn-out soil a German family find its sole support, and thanks the God who gave him so much as even that.

It is hard to believe in this land of liberty that whole households stand shivering at the door of the huts from which they have been evicted, hungering for bread and clamoring for labor to make it. These things are no fancy sketches, but the living, burning truth, and civilization has suffered it too.

The honest laborer of Europe is often highly cultivated and well prepared for any station in life, and yet for want of occupation he must live a pauper at home or find employment in other lands where labor is in demand, and the soil more productive and the burden of life less difficult to bear.

The Bureau of Agriculture, Statistics and Mines, into which the Bureau of Immigration was merged by an act of Legislature passed in 1875, needs \$10,000 to be used alone annually for immigration purposes, and \$15,000 for active use annually for advancing agriculture, statistics and mines. The sum heretofore appropriated (\$8,000 per annum for all departments) can be used with great profit to the agriculture of the State alone in publishing pamphlets, books, etc., for gratuitous distribution among the farmers of the State. More than one of the leading farmers of the State has complimented the Book of Addresses recently published by this Bureau, saying that it contained information of as much value to the Tennessee farmer as those works issued annually by the Department of Agriculture, Washington, D. C.

In looking over the whole field, I am proud to say that Tennessee is our rising ground, and that the prospect ahead is inviting and full of fairest promise. Our mineral wealth is being made known to the world, and capital is profiting by the knowledge. At no period in the State's history has the manufacturing interest been so large and growing; never before has the boundless wealth that lies in our hills and mountains received so much and encouraging attention.

Immigration is also coming into our borders in a steady and widening stream. The movement inaugurated in the fall of 1883 has spread to all parts of our State. Ten excursion trains of Northern prospectors have been run to the State since Oct., 1883, and encouraging numbers of people have settled. Those excursions came over the Illinois Central Railroad; but the Nashville, Chattanooga & St. Louis, the Louisville, Nashville & Great Southern, the Mobile & Ohio, the East Tennessee, Virginia & Georgia, the Chesapeake, Ohio & Southwestern, the Cincinnati, New Orleans & Texas Pacific and other roads co-operated, and thus the excursionists were enabled to visit pretty much all parts of the State. I feel justified in estimating, from data received through my correspondents, that between four and five hundred families have been settled in our midst by means of these excursions. I hope, if facilities are afforded me, to extend this system of cheap land excursions from the North to all the railways coming into our State, so confident am I that with the general co-operation of the railroads the movement will be glorious with results.

In connection with this immigration movement, there is an en-

couraging awakening of the agricultural interest. Last March the Southern Immigration Association brought together in this city representative farmers as well as public spirited men of other pursuits of all parts of the South, and the result was a better acquaintance with our conditions and needs, and the setting adrift, on currents of newly awakened interest, ideas and policies that are pregnant with good things now and to come. In February last a convention of Northern and Southern farmers was held in Jackson that is justly entitled to the credit of having put the stamp of success upon the immigration movement from the Northern States to Tennessee, and of having awakened an interest in material development, in the practical philosophy of better living, in those ideas and policies that widen human views and elevate human souls, that reached down into the great heart of the State and stirred it to an activity that has increased every month, and is bearing better and better fruit every day.

In that grand convention, Northern and Southern ideas and methods were compared under the softening influences of a generous hospitality, and under the impulse of a freedom that knew no restraints save courtesy. This splendid conference of practical men was followed by the great Live Stock and Dairy Convention held in this, our capital city, the 14th to 16th of the May following. Again, men from all parts of the Northwest and the New England States, eminent for success achieved on practical lines of life, as well as for ability, and many of the foremost editors of New England and the leading thinkers, farmers and professional men of our own State, participated in a tournament of ideas. Again' in Jackson, in the same month, the horticulturists of the State met, the occasion being a fruit and floral exhibition by the horticulturists of West Tennessee, to which eminent horticulturists throughout the United States were invited and in attendance. A large excursion of Northern people also attended this meeting, as well as the East Tennessee Farmers' Convention, held in Knoxville on the 21st and 22d of May, which was a splendid success and pregnant with benefits to our whole State and section. Again, representative agriculturists from all the States met in this city last November, the occasion being the annual session of the Farmers' Congress of the United States and the annual meeting of the National Grange. These two meetings brought together an exceptionally able body of

men—men deeply read and thoroughly trained in the noble science of agriculture. Again, was mind whetted against mind, ideas compared with ideas, theories analyzed, conditions revealed and needs set forth. From these great conventions and congresses of ideas and methods and policies has gone forth enriching facts and streams of living thought that will flow through years unborn in refreshing bounty.

I must here acknowledge my deep indebtedness to the press of the State in general for co-operation in this great work, but especially to the *Tribune and Sun* of Jackson, which was the pioneer of them all. Also to Captain J. F. Merry, General Western Passenger agent of the Illinois Central Railroad, who so thoroughly and nobly worked his end of the line. But most of all to my congenial and distinguished friend and co-laborer in this grand work, Mr. Robert Gates, of Jackson, Tennessee, who, like Saul of Tarsus, stands a head and shoulders above them all in energy of action and unselfish devotion to the development of the agricultural and industrial interests of Tennessee. I regret that our State cannot boast of a thousand such men as he.

I feel that Tennessee is in the morning of a new and brighter day. By soil, climate and mineral deposits she is, indeed, the queen of States. Every product that is grown between the great lakes and the Gulf may be grown profitably in Tennessee. She is a grain, a grass, a cotton, a tobacco and a sugar State; she is eminently a fruit State; she is par excellence a stock State; she is pre-eminently a manufacturing State, for she has the coal, the iron and the stone lying side by side, and the grandest water-power in the world. Where will you find her equal in that combination of elements that showers blessings on mankind?

I feel somewhat like one who has traveled a wearisome journey through a varied country relieved by exciting incidents, and stands at last on an eminence from which an unbroken prospect spreads out before him, inviting to greener fields, sweeter prospects and richer fruitions. For Tennessee I see this fair picture: a future filled with happy homes, the peace of plenty, the prosperity of inexhaustible wealth; and from the height gained by the toil of two years' faithful service, I see no shadow of a turning in the bright prospect for my grand old mother, Tennessee.

A. J. McWHIRTER,
Commissioner.

THE AGRICULTURAL GEOLOGY

OF THE

STATE OF TENNESSEE,

INCLUDING

*A Discussion of the various Soils and Notes on their Relation to the
Leading Crops, more especially Cotton; together with a
Statement of Work done in the Counties of
Henry, Carroll and Benton.*

BY

JAMES M. SAFFORD, *State Geologist.*

To the Hon. A. J. McWHIRTER, Commissioner :

SIR: I have the honor to present herewith a report on the Agricultural Geology of the State, including a discussion of the various soils, their relation to the leading crops, more especially cotton, together with a supplemental statement of the work done at intervals during the last two years in the counties of Henry, Carroll and Benton.

Toward meeting the expenses of the immediate work involved the State has contributed nothing with the exception of one hundred dollars paid me by yourself, as Commissioner, and that to aid specially in the prosecution of the survey in the counties mentioned. The subject matter herein presented was mostly worked up by myself as special census agent on cotton production for 1880, in Tennessee and Kentucky. The chief sources of information have been my own published works, the answers and notes of correspondents and personal observations made in the field while census agent. The report is, in the main, a republication of matter now inaccessible to the citizens of the State and the general public, and for its present form the State is largely indebted to the Census Bureau.

Permit me, sir, to add that there is much incompleted work to be done in the agricultural and economic geology of the State which a moderate appropriation of means would enable the geologist to carry on and perfect. The soils of certain sections and the formations underlying them have received less attention than those of other sections. Such soils, and there are important areas of them (for example, many acres in the belt of country of West Tennessee which includes the dividing uplands of the waters of the Tennessee and Mississippi rivers) need to be surveyed, mapped, analyzed and thoroughly discussed. Much remains also to be done in the way of developing our mineral resources. The more we know of our lands

and minerals the better can we ourselves use them and the better advertise them.

I beg further to call your attention to the fact that the publication of a new edition of the work known as the "Geology of Tennessee," is very desirable. The book was issued in 1869, fifteen years ago. It is now wholly out of print, and copies cannot be had. Constant applications are being made for it by those interested, or desiring to become interested, in the lands and minerals of the State. Much new matter has accumulated since 1869, to be elaborated and incorporated in a fresh edition of the work, which thereby would be enriched and made the more useful.

Very respectfully,

JAMES M. SAFFORD,
State Geologist.

OUTLINES OF THE PHYSICAL GEOGRAPHY

—OF—

TENNESSEE.

The southern boundary of Tennessee coincides mostly with the parallel of latitude 35° north: its northern limit is a broken line lying between the parallels of $36^{\circ} 29'$ and $36^{\circ} 41'$. In general outline the State has approximately the figure of a long rhomboid. Its mean length from east to west is about 385 miles, while its mean breadth cannot be much over 109 miles. Its land area is estimated to be 41,750 square miles; its water surface, 300 square miles.

VARIETY IN NATURAL FEATURES.

The length of the State, and the fact that it reaches, in its ribbon-like form, from the crest of a great mountain range on the east through the very low alluvial plain of the Mississippi on the west, through a varied territory, gives to Tennessee its most prominent characteristic, to-wit, *great variety*. This is seen in its topography, geology, soil, climate, agriculture, and we may say in the character and habits of its population. As I have said elsewhere (a) nearly all the important physical and geological features of the States around it are represented more or less (grouped as if for contrast) within its borders. Tennessee has, for example, on the one hand, some of the greatest mountain ridges of the Appalachians, with their "bald" summits and ancient rocks; on the other, the low land, cypress swamps, and alluvial beds of the Mississippi river. It has also well represented the singular parallel valleys and ridges of middle Virginia, the highlands, the "barrens," and the rich limestone lands of Kentucky, and the orange-

(a) Geology of Tennessee, 1869, p. 10.

colored sand-hills, the cretaceous beds, and cotton soils of northern Mississippi. The same variety and contrasts exist in the matter of climate, especially as to summer temperatures.

GENERAL TOPOGRAPHY AND ELEVATION.

To aid in understanding the topography of the State it will be well to assume and have in mind a great horizontal plane, having an elevation of 900 feet above the sea, with which to compare the *general surface*. Throwing out of view for the moment some of the local geographical features, that is to say, the mountain ranges of the eastern portion and the basins and valleys of the western, the general surface coincides more or less with this plane. I say more or less, for the surface is, in a degree, a warped one, coinciding at very many points with the plane, but at others either rising above or sinking below it.

The parts of the State approximately coinciding with our assumed plane of 900 feet elevation, or at least directly referable to it, are the great divisions named: the *plateau slope of West Tennessee*, the *highland rim of Middle Tennessee*, and the *valley of East Tennessee*.

The valley of East Tennessee is in its upper or northern part a few hundred feet above the plane, while in its central and southern parts it at first coincides and then very gradually falls below it. The highlands of Middle Tennessee in some counties, as in Lawrence and Wayne, present a flat surface 100 feet higher than our assumed reference plane, while in Montgomery and adjoining counties the corresponding highlands are considerably lower. The "ridge" in West Tennessee dividing the waters of the Tennessee and the Mississippi rivers, and including the summit-line of the great plateau slope, must at some points be nearly, if not quite, as high as the plane. Westward, however, the general surface sloping off towards the Mississippi, falls considerably below, and may be regarded as terminating at an average elevation of not far from 400 feet along the edge of the bluff escarpment which faces the alluvial plane of the great river.

Upon the surface, as described, rest the mountains of the State, the most important being the great ranges of the Unaka region and the Cumberland table-land. Cut out of it and below it are the central basin of Middle Tennessee, the western valley of the Tennessee river, and the Mississippi bottom region.

Politically, the State is divided into three large divisions, namely, West Tennessee, Middle Tennessee, and East Tennessee. The first embraces all the counties between the Mississippi and Tennessee rivers, including the whole of Hardin county, altogether less than one-third of the State ; the second the counties between the Tennessee river and a line approximately dividing longitudinally the Cumberland table-land, the largest division ; and the third all the remaining counties in the eastern end of the State,

CLIMATE.

As already stated, in climate, as in other natural features, the State presents a marked variety. This is especially true of summer temperatures. The valley lands of upper East Tennessee have the summers of Ohio and New Jersey ; the lowlands of Middle Tennessee have the summers of the northern part of Georgia ; while West Tennessee is warmed by the summer of the central parts of Georgia and South Carolina. And further, there is, as will be seen hereafter, an extended line of high points on the eastern border of the State which have the cool breezes of a Canadian summer, and are, to some extent, clothed with a Canadian flora.

The climate of the State, exclusive of its mountains, is in general midway in character between that of a temperate and that of a sub-tropical region, or rather it combines the milder features of the two. In common with a large part of the valley of the Mississippi, the climate is subject to comparatively great extremes ; yet these extremes never reach the excessive cold of the northern States or the highest temperature of the tropics.

Herbage is often green throughout the year, and cattle can generally graze with but little interruption from cold or snow, during all the months of winter. Many shrubs which in States farther north lose their leaves during the winter, here not unfrequently retain them the year round. The daily changes of temperature are considerable, and, in common with a large area of the Mississippi valley, the State has a full share of humidity and sufficient rains. It is a part of the region of which it is said " cotton, Indian corn, and the cane find their natural climate here, but not elsewhere in any considerable degree beyond the tropics."

The *annual mean temperature* along a parallel running longitudinally through the middle of the State is, according to the best ob-

servations and estimates, about 60.5° for West Tennessee, 58.5° for Middle Tennessee on the meridian of Nashville, and 57.5° for the valley of East Tennessee, the range being 3° . For the annual means of parts of West and Middle Tennessee, near the northern boundary of the State, one degree may be subtracted from each of the above numbers respectively, and for parts near the southern boundary one degree added. In East Tennessee two degrees must be added and subtracted respectively for the northern and southern means. These approximations are the best that can be made at present. In making them the temperatures of the mountain divisions, namely, the Cumberland table-land and the Unaka region have not been considered.

The length of the period between the last killing frost of spring and the first killing frost of autumn is to the agriculturist an important element of climate. It is the measure of the growing season, at least so far as the cotton-plant is concerned. Not including the mountains, the average time for the last killing frost of spring is the middle of April in the northern counties of the State, excepting in those of upper East Tennessee, where it occurs a few days later. In the southern part of the State it is a week sooner. The average time of the first killing frost of autumn in the northern counties is the middle of October. It occurs a few days earlier in upper East Tennessee, and a week later in the southern counties of the State. The number of days between these frosts, that of spring and that of autumn, averages 189 for the northern part of the State and 203 for the southern. Frosts, of course, may occur respectively before or after the times specified, but the probabilities are against it. Early frosts begin to be a source of apprehension before the last of September, especially in the more northern portions of the State, and the cotton crop often suffers more or less from them.

The latitude of Tennessee is such that a fall of two degrees of temperature in the northern part of the State might cause a killing frost, resulting in the destruction of the cotton-plants, while the same fall in the southern part would leave them intact. The length of the growing season for cotton is, at the best, short enough in the southern part of the State, and where so slight a change of temperature produces such results we can readily see how, in the northern part, it may be generally too short for full crops, which in re-

ality it is. It amounts nearly to the same thing to say that the margin of the cotton-growing section of the country runs through Tennessee.

In an inspection of the map showing percentage of aggregate areas in cotton, as compared with the entire area of any given region, it is seen that the counties in Tennessee which plant and produce the most cotton are strikingly the most southerly ones, and that from these the production decreases almost uniformly as we go north. This is especially so in West Tennessee. Now, in explanation of this, in great part at least, it is to be noted that the isotherms, or lines of equal temperature, for spring and fall extend west-northwest through the State, say parallel with a line running through Chattanooga and Trenton, or thereabout. This shows the southwestern corner to be the warmest, and here is our greatest center of cotton culture. The greater warmth stimulates the cotton, and by throwing back the killing frosts increases the length of the growing season. The soils have their influence, but that they are not dominant in this distribution of percentage culture is shown by the fact that as we go north the decrease occurs, though the soils and elevation remain essentially the same. It is also noteworthy that as we go eastward from each of the two centers of cotton culture (the southwesterly corner of the State and the southern part of the central basin) the percentage of cotton culture rapidly decreases. The temperature and higher elevation obviously have much to do with this decrease.

The *rainfall* for seven years (1873-1879) was: at Memphis, 54.40 inches; at Nashville, 51.98 inches; and at Knoxville, 54.52 inches, giving a mean of 53.60 inches. Our data indicate that we have the least rain in autumn and the most in winter and spring, yet so distributed through the months as to prevent any marked distinction into wet and dry seasons. The most favorable seasons are those in which the rainfall is about a mean, provided it is suitably distributed among the months. It is more frequently too dry than too wet during the summer.

THE ROCKS AND SOILS IN GENERAL.

The varied character of the natural features of Tennessee, both geological and agricultural, have already been referred to. As to the latter, this variety is marked, and will appear farther on. From

the North Carolina boundary to a line nearly coincident with that part of the Tennessee river which flows northwestward across the State from Mississippi to Kentucky the strata underlying the soils, excepting the limited river bottoms, are everywhere *hard rocks* of many varieties; gneissoid and half metamorphic conglomerates, slates and sandstones of the mountains to begin with; then calcareous shales, dolomites, and limestones of the valleys and calcareo-siliceous rocks of certain flat highlands. Much the greater part of the State, including the whole of Middle and East Tennessee, is made up of these hard rocks. Passing the line referred to, a wonderful change takes place. The hard rocks suddenly disappear, beveled off as if it was once a coast-line washed by the waves, and abutting against their beveled edges begin strata, little indurated, of clays, sands, and other material, which spread over nearly the whole of West Tennessee. The latter strata, which we call, by way of contrast, *soft rocks*, are of much later geological age than the former, and give to West Tennessee characteristic features.

The strata of the State, be they soft or hard rocks, are approximately horizontal in position, excepting those of the valley of East Tennessee and the Unaka mountains, which are generally tilted, dipping to the southwest, often at a high angle, with their edges outcropping at the surface in long lines running northeast and southwest. The position of the strata has much to do with the topography of a country and with the extent and shape of its agricultural areas. Owing to the outcropping of the tilted strata of East Tennessee in long lines, it is a *fluted* country, made up of closely packed long and narrow valleys and ridges, all running in straight courses to the northeast and southwest. Its best soils and agricultural areas occur, therefore, in long, narrow strips or belts separated by ridges. No such parallelism of valley and ridge is to be seen in the other parts of the State.

The soils are classified for the most part by the rocks, and it is the decay and disintegration of the latter which supply the inorganic materials. In Middle and East Tennessee, where, with unimportant exceptions, superficial drift formations are absent, the connection between the limestones, sandstones, shales, etc., and the overlying soils are very apparent. There being many kinds of rocks, there will be many kinds of soil, and the most important in the divisions just named are the calcareous soils; that is, those of

the limestones, dolomites, and calcareous shales. With the exception of the limited alluvial areas of certain streams the cotton of Middle and East Tennessee is produced, substantially, on calcareous soils.

The most important cotton soils of Middle Tennessee belong to two horizons of the Trenton limestone period, namely, the upper part of the Hudson river (Nashville) rocks, and certain beds of the lower part (the Central or Murfreesborough limestone).

In East Tennessee the little cotton cultivated is mostly found on the calcareous shale and dolomites of the Quebec (Knox) division of the Canadian period.

In West Tennessee the soils are chiefly based on sands, sandy clays, loess (calcareo-siliceous earths), and alluvial deposits. They are for the most part mellow, warm, and well adapted to the growth of corn, cotton, and tobacco.

THE NATURAL DIVISIONS OF THE STATE.

These have already been referred to, and are here briefly characterized. They are well defined, and will be taken as a basis in the arrangement of the matter of this report.

1. The Mississippi Bottom Region, embracing the Tennessee portion of the great alluvial and low plain in which the Mississippi river has its tortuous bed; area, approximately, 900 square miles; average elevation above tide, about 260 feet.

2. The Upland or Plateau Slope of West Tennessee, including the entire area between the low bottoms of the Mississippi and the Tennessee valley next mentioned. It begins with the line of bold bluffs or escarpments overlooking the bottoms, and gradually ascends eastward, embracing the ridge dividing the waters of the Mississippi and the Tennessee rivers, respectively, and the highlands immediately beyond. Average elevation, 500 feet; area, 8,850 square miles, equal to one-fifth of the State.

3. The Western Valley of the Tennessee River, a comparatively narrow, broken area, through which the Tennessee river flows in its direct northward course from the State of Mississippi to Kentucky. The valley is crowded between the breaks and slopes of two plateaus, the one just mentioned and the Highland Rim, lying next to the east. Average elevation, 360 feet; area, 1,200 square miles.

4—Ag.

4. The Highland Rim, or Rim Highlands of Middle Tennessee, encircling, terrace-like, a basin of rich lowlands in the very center of the State. From the valley last mentioned eastward to the western foot of the Cumberland table-land, a distance of more than 100 miles, there lies a nearly square portion of the State. This area is a plateau having an average elevation of 1,000 feet above tide, out of the middle of which has been excavated a basin, named below the *central basin*. The part left intact is the rim, a complete circle of flat highlands, with an area of 9,320 square miles, nearly two-ninths of the State.

5. The Central Basin.—The basin surrounded by the rim is thus designated. It is the central part of Tennessee, supplies the site for its capital, and is the garden of the State. It is oval in form, with longer and shorter diameters, respectively, of about 120 and 55 miles. Average elevation above the sea, 600 feet; area, 5,450 square miles, more than one-eighth of the State.

6. The Cumberland Table-Land, usually known as Cumberland Mountain, is a plateau with broad and generally level top, and stands in bold relief above the lowlands on each side. It is capped with sandstone, and is the Tennessee coal field. Elevation, 2,000 feet; area, 5,100 square miles.

7. The Valley of East Tennessee.—The great valley of which Knoxville is the metropolis is a fluted region or succession of parallel minor valleys and ridges, and is one of the most beautiful and populous portions of Tennessee. It extends obliquely through the State, and is bounded on the west and northwest by the eastern escarpment of the Cumberland table-land, and on the southeast by the Unaka chain. Average elevation, 1,000 feet, area, 9,200 square miles, exceeding one-fifth of the surface of the State.

8. The Unaka region comprises an area of bold mountain ridges, more or less parallel, having a general northeast and southwest trend and inclosing many valleys and coves, and is the eastern mountain border of the State. The line separating Tennessee from North Carolina is, for the most part, the crest of the most easterly and highest ridge. Average elevation of summit, 5,000 feet above the sea; area, excluding the interlocked valleys and coves, about 2,000 square miles.

THE MISSISSIPPI BOTTOM REGION.

That portion of the great alluvial plain of the Mississippi river pertaining to Tennessee, or, I might say, to Kentucky and Tennessee, is comparatively small. The course of the river is such on the western border of these States as to divide the plain very unequally, throwing much the greater part, popularly known as the Saint Francis bottom, into Missouri and Arkansas, and leaving a narrow interrupted strip in Kentucky and Tennessee.

In the latter States, as indeed farther south, the alluvial plain is bounded on the east by a sharply defined line of bold bluffs, or a bluff escarpment, the edge of the flat uplands which extend off eastward. This bluff escarpment, or edge, reaches in a nearly straight line from Kentucky, through Tennessee, to Mississippi. We shall call it the bluff. The strip of the great plain belonging to Kentucky and Tennessee is interrupted and cut into a number of sections by the repeated bending in of the river to the bluff. The river thus strikes the uplands at the following points: Columbus and Hickman, in Kentucky, and Fulton, Randolph and Memphis, in Tennessee (a). The largest of the sections, and the most important so far as Tennessee is concerned, lies between Hickman and Fulton. This includes Madrid bend and an area in Kentucky south of Hickman, but the main part is in Tennessee. The next most important section stretches from Randolph to Memphis. The section between Randolph and Fulton is inconsiderable, the points being but a few miles apart. Below Memphis begins the large division of the great plain known in Mississippi as the "Yazoo bottom." This belongs to the latter State, excepting the extreme northern end, which is in Tennessee. It is to be added that there is a number of cultivated islands in the Mississippi river which must be included in the Kentucky and Tennessee portion of the plain.

The alluvial plain of Tennessee has about the same general features as elsewhere. It is, or has been, forest-covered, much of it heavily so, and many parts are subject to overflow. It has its bayous, lakes, and cypress swamps. The highest land, and that

(a) Formerly the river washed the uplands at another point, "Old river," as now known by some, in the southern part of Tipton county. The four points, Fulton, Randolph, "Old river," and Memphis, were once known as the four "Chickasaw bluffs," Fulton being the first and Memphis the fourth.

chiefly under cultivation, often called "front-land," is generally a raised, wide bank or belt bordering the river, and formed by the deposition of alluvial matter in great overflows of the past, the overflowing water having lost the bulk of its earthy load as it first escaped from the deep and swift channel current. Going from the river and this higher land, the surface generally slopes off into lower "back lands," with "buckshot" clays and soils, finally ending, it may be, in a lake or a cypress swamp. Such at least are the typical features. This division embraces the whole of Lake county, about one-third each of Dyer and Lauderdale counties, and a fraction each of Tipton and Shelby. It also embraces Reelfoot Lake and limited lands in Obion county. The entire area has been estimated to be 900 square miles, but this is probably an overestimate.

* * * * *

The cultivated land forms for the most part an interrupted belt along the Mississippi river, and has a width ranging from the fraction of a mile to two miles or more. The greatest single body of such land lies in the middle and northern parts of Lake county, where the proportion in cultivation is estimated to be at least two-thirds of the area. In the southern part of Lake the proportion is not more than one-fourth, half of which is along the river. There is much timber land, and large bodies are subject to overflow. South of Lake county the proportion of land in cultivation is still less. In Dyer county the cleared land is a more or less broken strip bordering the river from half a mile to two miles wide, with an average width of one mile. There are, however, in this county many thousand acres fit for farming purposes as yet uncleared.

The following extracts from letters of correspondents refer to the Mississippi bottom region in Lauderdale county. The characteristics given, however, may in the main be taken as illustrative of the general features of the entire division in Tennessee. Mr. J. L. Lea of Fulton writes:

"A slip of cultivated land runs along the Mississippi river, and but little lies back from the river. The best and highest land is always along the river. The bottom about the mouth of the Hatchie is small. Hatchie bottom proper is about one mile or two miles wide, and has a slough of cypress timber and some tupelo-gum

swamps. There is not much cultivation until you strike the second bottom along the foot of the hills.

The main Mississippi bottom region of this county is the area lying between Coal creek, Forked Deer river, and Mississippi river, an area say 8 to 10 miles wide and 15 or 20 long, and including 100,000 acres. I believe that in extreme high water every spot of this has been covered, unless it be certain Indian mounds.

There are farms in the bottom bordering the Mississippi river, but not along Coal creek or Forked Deer river. It is three or four miles above the mouth of Coal creek before the farms begin. I suppose 6,000 or 8,000 acres would cover all the cultivated land of the bottom. Cypress swamps exist all through the area, say 25 per cent. of the whole. I do not know that there are any tupelo-gum swamps in it; do not remember to have seen or heard of any. This bottom would be a magnificent tract of land were it not for the interference of the water. There is a disposition to bring it into use notwithstanding, and some persons are clearing more deeply overflowed lands than had been thought available. I have cleared some land having 10 or 12 feet overflow, and make corn on it almost every year. I plant in June, and secure 40 or 50 bushels of hard corn per acre. It is safer from overflow in summer than any creek or river bottom in hilly or mountainous countries. I suppose 25 per cent. of this bottom overflows two feet or less, 25 per cent. five feet or less, 25 per cent. ten feet deep or less, and the balance is made up of lakes and sloughs. Two-thirds of the cultivated land is in cotton. There is no road along the bank of the Mississippi river across the mouth of Coal creek, and none, I think, across the mouth of old Forked Deer river, except, perhaps, in low water. Roads are found in all the farming areas. These statements are necessarily imperfect, and in some points may be incorrect."

Mr. J. C. Marley, of Ripley, writes :

"According to the best statements I can make, there are about 100,000 acres of land between the bluff and the Mississippi river termed bottom or overflowed land. This is equal to about one-third of the area of the county. Of this there is in cultivation about 8,000 acres, of which about 5,000 are in cotton. Most of the cultivated land is near the river, and lies in a broken belt along its banks. There are a few patches of cultivated land out back from the river; and

other land is also susceptible of improvement, some near the bluff or highlands. A very little of this bottom land is entirely above the extreme high water, but there is much of it on which the overflow is slight. I would estimate that on one-third of the land the water never gets more than two feet deep, and that on one-half it never exceeds four feet. It is thought by our best farmers on the river that a slight overflow is advantageous. The difficulty in cultivating land subjected to deep overflows is that the fences float away. There is no land in our county that produces so well as this bottom. A friend of mine near Hale's Point tells me that he has for the last eight years cultivated about 50 acres in cotton, and that it averaged each year 500 pounds of lint to the acre."

The bottom in Tipton is estimated to average 4 miles in width. Farms occur at intervals all along the river, but none back until the bluff is reached. This country includes also four islands, containing in the aggregate 17,000 acres, 2,500 of which are under cultivation. The bottom continues into Shelby, with the same general features as heretofore described.

The soils may be grouped into two classes, the "loams" and the "buckshot" clays. The loams prevail, and are dark and exceedingly fertile, at times clayey and stiff, and then sandy and mellow, sometimes becoming too sandy. The buckshot soils are subordinate. Mr. Lea says:

"The term 'buckshot' is applied to certain stiff black soils which break up into small fragments when cultivated. These soils are not uniform in kind, and vary a little in color and in other characteristics. They are not generally found in very large bodies, as the overflows deposit sandy and loamy lighter soils at intervals upon them."

These buckshot soils are derived from a stratum of dark clay which extends throughout the bottom, and upon which, as a floor, the high waters deposit their alluvial load.

No analyses have been made of samples of the soils of this division taken from Tennessee. Analyses, however, have been made of the corresponding soils in other parts of the Mississippi plain which fairly represent the composition of those of Tennessee.

We select as typical the following analyses, the soil being found in the Yazoo bottom in Mississippi. They are extracted from Pro-

fessor E. W. Hilgard's report on the cotton production of Mississippi.

No. 354. *Dark-colored, rather light loam*, from Tallahatchie county, Mississippi, a good representative of the "front-land" soils.

No. 376. *Grayish, rather sandy soil*, from Sunflower county, Mississippi. This land is reported as not much esteemed by farmers.

No. 394. *Stiff, pale gray loam*, with yellowish or orange flecks, so that, when worked up the soil is somewhat yellow. This soil is from Issaquena county, Mississippi.

No. 396. *Light "buckshot" clay*, taken from the edge of a depression or pond, Coahoma county, Mississippi.

No. 390. *"Buckshot" soil*, of Deer creek back-land, Issaquena county, Mississippi. It is a stiff, dark-colored clay soil, traversed by numerous cracks, and mottled with spots of ferruginous matter. Upon drying it breaks up into little angular fragments. It is exceedingly fertile.

Mississippi River bottom soils, Mississippi.

	TALLAHATCHIE COUNTY.	SUNFLOWER COUNTY.	ISSAQUENA COUNTY.	COAHOMA COUNTY.	ISSAQUENA COUNTY.
	Tallahatchie bottom soil.	Indian Bay front-land soil.	Sunflower River front-land soil.	Light-colored buckshot Clay.	Deer Creek buckshot soil.
	No. 354.	No. 376.	No. 394.	No. 396.	No. 390.
Insoluble matter.....	87.146 } 91.944	87.898 } 91.934	71.164 } 84.670	75.513 } 86.408	51.063 } 71.767
Soluble silices.....	4.798	4.036	13.506	10.895	20.704
Potash.....	0.301	0.226	0.401	0.606	1.104
Soda.....	0.084	0.116	0.191	0.146	0.325
Lime.....	0.301	0.153	0.406	0.386	1.349
Magnesia.....	0.385	0.256	0.698	0.972	1.665
Br. ox. of manganese.....	0.158	0.048	0.011	0.133	0.119
Peroxide of Iron.....	2.120	1.848	3.845	2.804	5.818
Alumina.....	2.151	2.565	6.889	4.457	10.539
Phosphoric acid.....	0.112	0.162	0.165	0.276	0.304
Sulphuric acid.....	0.005	0.042	0.016	0.007	0.024
Water & org. matter.....	2.644	3.013	2.748	4.401	7.369
Total.....	100.205	100.363	100.038	100.598	100.383
Hygroscopic moisture.....	4.79	4.07	7.39	6.04	14.31
absorbed at.....	22 C.°	14 C.°	15 C.°	12 C.°	15 C.°

In giving these analyses, Professor Hilgard makes the following remarks:

"These soils are types of the prominent soil-varieties occurring

equally on both sides of the Mississippi north of the mouth of Red river. Without entering into a detailed discussion of these soils in this place, it is important to call attention to the fact that in its store of plant-food of all kinds the "buckshot" soil stands pre-eminent above all the rest, and well justifies its reputation of being the most productive and durable soil of the great bottom. Unlike most other clay soils, it may be tilled at almost any time when the plow can be propelled through it, because, on drying, it crumbles spontaneously into a loose mass of better tilth than many an elaborately tilled upland-soil. It is of such depth that the deepest tillage, even by the steam plow, would not reach beyond the true soil material; and its high absorptive power secures crops against injury from drought. At the same time (owing doubtless to its being traversed by innumerable fine cracks and being underlaid by gravel and sand) it drains quite readily. In good seasons a large part of the cotton crop grown on this soil has often been left unpicked for want of labor, after taking off from 1,500 to 1,800 pounds of seed-cotton to the acre. Two bales of lint per acre can undoubtedly be produced on such soils with fair culture and good seasons.

THE UPLAND OR PLATEAU SLOPE OF WEST TENNESSEE.

This large and important division is pre-eminently the cotton region of the State. Leaving the great bottom at any point, we ascend the bluff to an average elevation of about 130 feet and find ourselves upon a flat and wide-spreading plateau. From the bluff the plateau extends eastward, gradually rising to the Tennessee ridge, by which name the high belt of country which lies on both sides of the actual summit of the water-shed dividing, respectively, the waters of the Mississippi and Tennessee rivers, and chiefly within the counties of Henry, Carroll, Henderson and McNairy, has been designated. The plateau, or plateau slope, has from its western to its eastern limit a mean length of about 84 miles. Its form is nearly rhombic, and its area 8,850 square miles. It is a section of a greater plateau lying in Kentucky, Tennessee and northern Mississippi, between the bottoms of the Mississippi river on the one hand and the valley of the Tennessee on the other, and embraces in its

area the following counties and parts of counties: All of Weakley, Gibson, Carroll, Crockett, Haywood, Madison, Henderson, Fayette and Hardeman; much the greater parts of Henry, McNairy, Shelby, Tipton, Lauderdale and Obion, and smaller parts of Hardin, Decatur, Benton and Dyer.

The division is well supplied with water-courses. The summi of the water-shed is so near the Tennessee river that much the longer slope is on the Mississippi side. On this side, therefore, the rivers are most characteristic. They are numerous and long for their water volume, and run in nearly parallel courses, from the Tennessee ridge northwestward, until they intersect or nearly reach the line of the bluff, when they turn southwestward through the bottoms of the Mississippi river. These rivers have sluggish currents, and usually a wide flat bottom on both sides, bearing a heavy forest growth, and are often swampy and subject to overflow. Back from the immediate bottoms the surface often rises in "second bottoms," supplying arable lands of good quality.

The following data indicate the general elevation of the plateau slope. The Tennessee ridge, or belt of highlands referred to, has in the southeastern part of the division, in McNairy and Henderson counties, an elevation above tide of from 500 to 600 feet. Some points exceed this, probably reaching as much as 800 feet. From Jackson northward the elevation ranges from 400 to 500 feet, and going toward Memphis the elevation falls considerably below 400 feet. The bluff has a mean elevation of about 400 feet. At Memphis its height is below the average both as to the sea and as to the Mississippi; at Randolph its height above both is an average. Passing northward, its elevation above tide becomes greater, but remains about the same as to the Mississippi.

We divide the plateau slope into three subdivisions, as follows:

1. The bluff region.
2. The brown-loam table-lands.
3. The summit region of the water-shed.

THE BLUFF REGION.

The bluff region includes nearly the whole of Obion county and the larger parts of Dyer, Lauderdale, Tipton and Shelby counties. It is a belt of country from 20 to 25 miles wide, extending from Kentucky to the State of Mississippi, and lies

east of and adjoining the Mississippi bottom. Its eastern limit is approximately coincident with that of the tier of counties mentioned. Its soil is a calcareo-siliceous loam, often called clay, based on yellowish-gray or often an ashen-colored loess, more or less calcareous. (a) The loess itself rests on a bed of gravel and orange sand, which sometimes appears at the surface, especially near the eastern margin of the belt, in washed places and road-cuts. The upland soil is the prevalent one, and varies in color from a gray or ashen to a brown or dark loam, is deep and mellow, in fine pulverulent condition, easily tilled, contains more calcareous matter than is ordinarily met with in the soils of this part of the State, and is altogether a superior upland soil. It is easily washed, and needs judicious tillage. It is remarkable for its forest growth. In some sections it supplies the largest trees to be found in the State, great "poplars" (tulip-trees), oaks, sweet gums, elms, hickories, walnuts, sassafras (growing up like great pine trees, with long trunks), beeches, and other trees, reaching dimensions much above the average. In favorable seasons from 1,500 to 1,800 pounds of seed-cotton are often raised per acre upon the best of this land. Shelby, the most southerly county of the belt, produced in the main upon this soil in the census year more cotton than any other county of the State, besides making good crops of Indian corn and oats. Owing to long or improvident culture the soil in some sections is more or less exhausted. It and its substratum, however, are strong in the elements of fertility, so much so that, unless badly cut up by washes, it is susceptible, when impoverished, of great improvement, or even restoration.

In addition to the uplands, the second bottoms of the streams, both of creeks and rivers, supply a large aggregate of arable land of good quality, the soils being strong loams or mixed soils composed of ingredients from the loess and subjacent strata. And further, the alluvial dark bottom lands of the creeks, if escaping ordinary overflows, are often very fertile and durable. As a general thing, the bottoms of the rivers are clayey and cold, but they sometimes present areas prized for their fertility.

The following analyses are given of a representative soil and

(a) This formation, the loess, can be satisfactorily studied in the bluff at Memphis. All the material of the bluff here above high-water mark belongs to it. The cuts made for the streets and railroads expose it well. The gravel and sands underlying the loess at this point can only be seen at low water.

subsoil and loess of this region. The specimens were taken and averaged with care in accordance with directions given by Prof. E. W. Hilgard:

No. 15. *Upland soil* from a poplar grove at Gill's station, 2½ miles east from Memphis, Shelby county. Depth, 6.2 inches; timber growth, chiefly poplar (tulip tree), sweet gum, and hickory; also sugar-maple, red and other oaks, red-bud, and dogwood. The soil, after drying, has a light, brownish-gray or ashen color.

No. 16. *Upland subsoil*, taken below the above soil. Its appearance, with the exception of a yellowish cast, does not differ very much from the soil.

These analyses have representative value, but it will require the analysis of many such specimens, selected from all the counties of the belt, to give true averages of the composition of this upland soil and of its most important varieties.

No. 17. *Loess* from the river bluff at Memphis, Shelby county, taken at 12 inches. This specimen was selected by J. G. Snedecor, Esq., of Memphis.

• *Lands of the Bluff and Loess Region, Shelby county.*

	GILL'S STATION.		MEMPHIS BLUFF.
	Upland Soil.	Upland Subsoil.	Loess.
	No. 15.	No. 16.	No. 17.
Insoluble matter.....	84.646 } 89.112	83.128 } 86.981	73.113 } 76.508
Soluble silica.....	4.466 }	3.853 }	3.390 }
Potash.....	0.332	0.399	0.433
Soda.....	0.085	0.181	0.180
Lime.....	0.248	0.243	3.967
Magnesia.....	0.677	0.438	3.291
Brown oxide manganese	0.030	0.042	0.094
Ferric oxide.....	2.416	3.664	4.687
Alumina.....	2.333	5.026	3.102
Phosphoric acid.....	0.083	0.064	0.319
Sulphuric acid.....	0.080	0.010	0.060
Carbonic acid.....	.....	.....	5.561
Water and organic mat'r	4.159	2.620	1.730
Total.....	99.555	99.668	99.927
Hygroscopic moisture.....	5.00	6.31	4.67
absorbed at.....	16 C.°	17 C.°	16 C.°
Humus.....	1.062	.....	.....
Inorganic matter.....	0.972	.....	.....
Available silica.....	0.473	.....	.....
Available phosphoric ac..	0.049	.....	.....

[The soil and subsoil from Gill's station, while having a fair amount of potash and lime, are deficient in phosphoric acid. More than one-half of the latter is in an available form in the soil, as shown in the humus determination. The loess, much less sandy than the other soil, is also richer in potash, and contains large percentages of lime and phosphoric acid, as well as of magnesia. Its organic matter is low.—R. H. L.]

THE BROWN-LOAM TABLE-LANDS.

The region of the brown-loam table-lands constitutes the largest and most important agricultural subdivisions of the plateau slope. These table-lands present a belt-like area, extending through the State, twice as broad as that of the bluff region, and embraces the following counties, which we may call the *midland counties* of the plateau slope: Fayette, Hardeman, Haywood, Madison, Crockett, Gibson, and Weakley, together with large parts of Carroll and Henry, and small parts of other counties. Its area is about 4,450 square miles, or about half that of the entire plateau slope.

Of the counties mentioned, the first seven only are considered in the remarks immediately below, Carroll and Henry being included in the third subdivision and the fractional parts of the others in the first and third. The subdivision, as thus limited, supplies about five-twelfths of the entire cotton product of the State, besides being surpassed by only two sections in the yield, respectively, of Indian corn and tobacco (the central basin in corn and the western subdivision of the highland rim in tobacco, both sections of Middle Tennessee).

The table-lands subdivision, including the counties and parts of counties first enumerated, is a plateau region of moderately rolling uplands cut into sections by the numerous rivers and their tributaries. The formation underlying the soils and subsoils is the orange sand of the drift. The orange, yellow, and sometimes gray sands of this formation are often seen in the railroad cuts, in gullies, and in bluffs on the rivers, at depths below the subsoil of from 3 to 10 feet or more. The soil of the uplands is, of course, the prevailing one. It is a brown, or, when moist, blackish, warm, siliceous loam, noted for its mellowness, and on slopes is easily washed, and therefore requires careful handling. The subsoil is reddish-brown and more clayey than the surface soil. The soil is

well suited to the culture of cotton, especially in a region like that of West Tennessee, where the shortness of the growing season (the period between killing frosts) makes early maturity desirable. The same belt of country and soil extends far into Mississippi, where it contributes largely to the production of the best upland cotton in that State. The soil is tolerably uniform in character, though here and there sections occur which, by their more stunted natural growth, show them to be below the average fertility. (a) In many districts the soil has been more or less injured by bad or improvident culture, and can no longer yield as formerly. In this way lands once of first grade have been reduced to the second or even third grade. Where it is not too late it should be looked to that no further deterioration of this kind shall occur, and that the soils which have suffered shall be brought back to something like their primitive strength and fertility.

The characteristic native growth of the soil is oak—white, red, black, Spanish, post, and black-jack oaks. Hickories are common, with “poplars;” also some walnuts, maples, chestnuts, dogwood, hazel-nut, and many other trees and shrubs. Rarely patches of poorer sandy spots are met with having a growth of pine trees.

The soils of the second bottoms, though generally not the best for cotton, may be richer than those of the uplands. When mellow and gravelly, they are often in dry seasons the best for cotton. The bottoms, above overflow, have sometimes a very fertile soil. Then again, they are too clayey and crawfishy.

No analyses have been made of samples of soils from this subdivision in Tennessee. Fortunately, however, the belt extends into the State of Mississippi, and the analyses of its soils there will, doubtless, fairly represent their composition here. The following analyses are taken from Professor E. W. Hilgard's report on cotton culture in Mississippi :

No. 216. *Soil from the table lands* on the divide between Coldwater and Wolf rivers, near Lamar, Benton county, from a level

(a) It may be remarked here that the upland soil of this subdivision merges insensibly into that of the bluff region. Both are mellow, siliceous soils, and in their best condition are very fertile. Many of the correspondents treat the soils of the two subdivisions as one, and so speak of them in their reports. The underlying loess of the bluff thins out eastwardly to a feather edge overlapping the orange sand, the two often, doubtless, contributing to the formation of the same subsoil.

tract below Summit ridge. Timber, black-jack, post oak, and hickory, with some sweet gum and a few Spanish oaks. Depth taken, 10 inches; quite mellow, and of a "mulatto" tint.

No. 235. *Subsoil* of the above, 10 to 20 inches.

No. 219. *Subsoil* from same section of land, but taken on the Summit ridge itself; resembles the last.

Brown-loam table-lands of Mississippi.

	Soil.	Subsoil.	Ridge subsoil
	No. 216.	No. 235.	No. 219.
Insoluble matter.....	83.347	83.993	82.830
Potash.....	0.549	0.700	0.630
Soda.....	0.082	0.041	0.090
Lime.....	0.245	0.139	0.270
Magnesia.....	0.479	0.597	0.450
Brown oxide of manganese.....	0.760	0.332	0.060
Peroxide of iron.....	4.798	3.862	5.110
Alumina.....	6.232	7.729	8.090
Phosphoric acid.....	0.068	0.236	0.210
Sulphuric acid.....	0.062	0.054	0.020
Water and organic matter.....	4.195	2.716	3.140
Total.....	100.867	100.899	100.900
Humus.....	0.787	.....	.....
Available inorganic.....	0.668	.....	.....
Hygroscopic moisture.....	6.84	7.42	.....
absorbed at.....	17 C. ^o	17 C. ^o	.....

Professor Hilgard thus discusses these analyses :

"The common chemical characteristics of these soils, and especially of their subsoils, are high percentages of potash and lime, with usually a large supply of phosphoric acid in the subsoil, at least of the heavier lands. Potash is not likely to become deficient in the subsoils at least; but the supply of humus is not large (as in fact is evident from inspection), and green manuring is one of the most important improvements indicated. Originally this was not the case, for the surface soils were, and in protected spots still are, dark-colored to almost black when wet; but the washing away of the surface and the burning of the woods have served to deplete the surface of this and other important ingredients, so that over a large

portion of the region it is the subsoil, and not the surface soil, as given in the analyses, that the farmer has to deal with. In this case the addition of vegetable matter is, of course, doubly important ; and green-manuring of denuded tracts with cowpease is one of the most convenient, as it has proved to be one of the best, means of improvement. The analyses show that so long as the subsoil remains the question of restoration of a 'tired' soil is simply one of time and judicious management."

THE SUMMIT REGION OF THE WATER SHED.

This is the part of the upland or plateau slope through which the Tennessee ridge extends in its nearly south and north course from the State of Mississippi to Kentucky. The summit line of this ridge, dividing the waters of the Mississippi from those of the Tennessee, passes through the counties of McNairy, Henderson, Carroll and Henry, and the region is made to include the counties of McNairy and Henderson, the eastern parts of Henry and Carroll, and the western parts of Hardin, Decatur and Benton. On the west it merges gradually into the second subdivision, the brown-loam table-lands, and on the east reaches the breaks of the high-lands, finally sinking away into the western valley of the Tennessee river. Its breadth along the Mississippi state line is thirty-five or forty miles ; but it grows narrower as we go north, until along the Kentucky line the breadth is reduced to eight or ten miles. The area is about 2,830 square miles. Though containing tracts of level lands, it is, as a whole, very broken. In some of the counties, as in McNairy and Henderson, the ridges are high and bold, presenting many wild and picturesque sections. In the northern part of the area the valley of the Big Sandy traverses it longitudinally and modifies to some extent the roughness of its features. The mean elevation of the water-shed and the heights of the ridges were referred to in discussing the elevation of the entire plateau slope.

The streams are generally small, those on the western side of the summit-line being merely headwaters of rivers flowing into the Mississippi, while those on the eastern side are necessarily small, on account of the proximity of the summit to the Tennessee river. The Big Sandy has such a course as to make it exceptionally large and long. Beech river, rising in Henderson and crossing Decatur county, is the next most important stream. The other streams

consist of creeks and branches, some of the former being of noteworthy size.

The soil most frequently met with is a sandy loam derived from both the orange sand and older sandy strata. There is, however, a great variety of soils, the subdivision embracing, to a great extent provisionally, belts of country having different soils with different formations underlying them. Approaching the Mississippi State line, this variety is more marked, the area becoming easily separable into belts, each with a soil and a surface more or less distinct. Just within Mississippi, where they have been much more thoroughly studied than in Tennessee, they are named as follows, commencing with the most westerly: The *Flatwoods belt*, the *Pontotoc ridge*, the *Short-leaf pine and oak sandy uplands*, the *Black prairie belt*, and lastly, the *Short-leaf pine and oak sandy uplands* again.

FLATWOODS BELT.

The *Flatwoods belt* extends through Tennessee, though its name is not especially descriptive of its surface or topography here, for it is often broken and hilly. Its characteristic underlying strata are beds of laminated or slaty clays, of dark color when wet, but light gray when dry, and varying in thickness from an inch to a hundred feet or more. With these are interstratified more or less sand. Often, however, these strata are covered or concealed from view by the deposits of the orange-sand formation. The soils are of two general classes, the clayey and heavy and the sandy and light, in accordance with the character of the strata upon which they rest. The superficial orange-sand contributes a large proportion of its mellow light soil.

SANDY PINE AND OAK UPLANDS.

The *sandy pine and oak uplands* occur in two belts. We consider the more westerly first. The *Pontotoc ridge* area extends from Mississippi into Tennessee, but soon runs out, and is lost in the sandy pine and oak uplands. This area brings with it calcareous strata, limestone even, while a little to the west of it occurs "green (glauconitic) sand," much like the "greensand" of the black prairie belt, to be described. Such formations exist in the southeastern corner of Hardeman county. With them, however, are many beds of

interstratified sand, showing often interlaminated clayey leaves. Going north, the calcareous and glauconitic materials disappear and give place to laminated sands; but as with the flatwoods, so here the orange sand has spread its material over a great part of the belt, concealing the older beds, and in many sections giving character to the agricultural features of the surface. As provisionally given upon the map, including the area made by the projection of the Pontotoc ridge belt into the State, the sandy pine and oak uplands form the largest of the belts of the summit region, reaching throughout the State. On the Mississippi State line it is fifteen miles wide, but has a less average width, and it is exceedingly varied in agricultural features. It has areas of poor pine uplands, but these make in the aggregate little of its surface; it is in the main rough and broken, yet there are numerous large bodies of arable land, which lie well and are productive. Some of these are uplands, others valley lands, of which those of the Big Sandy are to be noted.

BLACK PRAIRIE BELT.

The *black prairie belt* adjoins on the east the region just described. It is well known in Tennessee as a distinct area, but the designation *black prairie* is more generally applicable in Mississippi than in Tennessee. The characteristic underlying formation is known as "greensand," and farther south as "rotten limestone." It is a great bed, at some points 300 feet deep, of clayey sand, highly calcareous, containing green grains of a soft substance (glauconite), and at many points abounds in fossil sea-shells, among which are huge oyster shells. The belt thus characterized has, commencing with the Mississippi line, an average width of about eight miles for at least half way through the State. Farther north it becomes inconspicuous, and its limits in this direction have not been satisfactorily made out. It extends through the eastern parts of McNairy and Henderson counties and the northwestern corners of Hardin and Decatur. Much of it is very hilly and rough.

The soils of the belt, where resting upon the greensand, and normally formed from them, are more clayey and calcareous than is usual in West Tennessee. We would naturally look also for a greater percentage of potash in them, as the substance of the "green grains" contains this constituent in its composition. Where the land lies well this soil is often strong and fertile, and on ridges it is

usually sandy and thin. The subsoil derived from the green-sand is from two or three to twenty feet in depth. It is a grayish or dirty buff, tenacious material, locally called "joint clay," from its tendency to cleave when drying in irregular block-like masses.

At numerous points in McNairy and Henderson counties the greensand comes to the surface, forming "glades" or "bald places," spotted over with a stunted growth of trees or shrubs. In these places the formation often presents a gray marly surface, with little or no depth of soil or subsoil.

It is to be observed, however, that a large proportion of the soils of the belt are not those of the greensand. As in the belts described, over much of the area the orange sand covers and conceals all else, supplying on level or rolling spots its mellow, fertile soil, or on rugged places a sandy and gravelly one, of little or no fertility.

EASTERN SANDY PINE AND OAK UPLANDS.

The last belt of the summit region is the eastern belt of the *sandy pine and oak uplands*. This in its underlying formations and soils is much like the first belt of this name. Much of it is covered with the orange sand, which here often includes beds of gravel. It occupies a belt of country varying from two to eight miles in width, and extends northward more than half way through the State. In Hardin county it reaches the Tennessee river, and here forms a part of the immediate valley of the river. This part is only included in the plateau slope of West Tennessee, for the reason that its formation, a sandy one, naturally belongs to this division of the State; and the same may be said of that part of the black prairie belt lying in the western part of Hardin and the eastern part of McNairy counties.

THE WESTERN VALLEY OF THE TENNESSEE RIVER.

This division has been briefly characterized before. As compared with the plateau slope just described, it shows a marked falling off in the percentage of land in cotton. The northeastern part of the division, that east of the Tennessee and north of Duck river, is in the "penumbral region" of cotton culture, very little cotton being produced. Passing from this to the southwestern part, the percentage rises, until in the western portion of Hardin county

and on the eastern border of McNairy it reaches the maximum for this division.

The Western valley, as already stated, is a long, narrow, and comparatively broken area, crowded between the spurs and breaks of two plateaus, one on the west and the other on the east side of the Tennessee river. Its limits on both sides may be taken to be the lines respectively along which the highlands for the most part break away. As thus limited, it has an average width of not more than ten or eleven miles, with an area, say, of 1,200 square miles (a small portion of the State), and embraces the greater parts each of Benton, Decatur and Hardin counties, much of Henry, a little of McNairy, the western portions of Stewart, Houston, Humphreys and Perry, and the northwestern corner of Wayne. The bounding highlands on both sides are fringed with numerous spurs, many of which run within two or three miles of the river, and some quite to it. Interlocked with the spurs, the valley sends out many ramifications, among which are the narrow valleys of the tributaries of the Tennessee river, not a few of which run back 10 or 15 miles and some 20 or more before they terminate. Some of the creek valleys of Hardin and Wayne are among the longest ramifications. These are serpentine and narrow, averaging not more than a mile in width, but at many points are very fertile. The spurs separating them are high, flat-topped arms of the highlands, like most of the spurs on this side of the valley. Buffalo river, with the lower part of Duck river, in Wayne, Perry and Humphreys counties, presents in its valley an important ramification. This, however, and the upper parts of the long creek valleys mentioned, are to be regarded as deep cuts in the division next considered, the Highland Rim. The valley of the Big Sandy is a ramification on the western side of the division.

Taking the high-water elevation of the Tennessee river as the floor of the valley under consideration, its average elevation above tide is about 360 feet. The depth of the valley below the highlands that bound it on the east is, say, 500 feet, and below those on the west not far from 350 or 400 feet.

The formations of the division are of many kinds. We have, in our progress eastward, the last of the sandy and clayey strata of West Tennessee and the first of the solid strata, the limestones and siliceo-calcareous strata of Middle Tennessee. It thus includes the

junction of the soft rocks of the one with the hard rocks of the other—a junction which appears to mark the position of the ancient coast-line referred to on a previous page. Here and there, also, overlying the formations on each side of the junction, and indeed on both sides of the Tennessee river, are patches of sandy material and gravel pertaining to the eastern margin of the orange-sand drift.

In the more southern counties (Decatur, Perry, and the eastern part of Hardin and Wayne,) numerous “glades” are met with—gravelly, marly places, resulting from the appearance at the surface of a gray, often shaly, limestone, with but little or no covering of soil. With the exception of patches of bushes or shrubby cedars, these places are nearly naked. These glades are sometimes several acres in extent, and make in the aggregate a large area, occurring usually on hillsides and slopes, but often forming the surface of isolated and low knobs, and are wholly different from those before spoken of as characteristic of the “black prairie belt.” In another section of the valley, however, the western part of Hardin and the eastern part of McNairy, many of the glades of the black prairie belt do occur, which have been already noticed in connection with the belt to which they belong.

Alluvial bottoms occur alternately on the two sides of the river. There are not often more than a mile wide; yet their aggregate area is very considerable. The bottoms usually have high “front-land” along the river, and lower “back-land” away from it, the latter sometimes running into swamps, often cypress swamps. The bottoms of the tributary creeks, also, are to be taken into account, as they make an important addition to the agricultural capabilities of the valley.

This variety in formation gives a great variety of surface and soil. The alluvial lands are generally very productive, and yield abundant crops of Indian corn, the chief product. Much of the second bottom and arable sloping lands of this division and of the ramifications running out from it, especially on the eastern side of the river, are made gravelly by the angular flinty *debris* from the siliceous rocks of the ridges, and where not worn too much are generally very mellow, productive lands. Some of the limestone lands, also, are gravelly, from the liberation and shivering of the flinty seams contained in the underlying rocks. To these may be added

patches of gravelly land resting on the water-worn gravel of the drift. Areas of flatwoods land occasionally occur, as in Hardin county.

The chief products of the valley are, in the order of greatest importance, Indian corn, wheat, cotton, oats and tobacco. With these also must be given peanuts, a crop of no little importance in some sections. While most of the cotton is the product of the southern part of the division, most of the tobacco comes from the northern part.

THE HIGHLAND RIM.

The general topographical characteristics and the limits and area of the Highland Rim have been briefly given. It is a great rim of flat highlands, within which lies the Central Basin. I have divided the area, for convenience, into two subdivisions, the western and the eastern. The first includes the following counties and parts of counties; Montgomery, Robertson, Dickson, Hickman, Lewis, Wayne, Lawrence, the greater parts of Perry, Humphreys and Stewart, considerable portions of Giles, Hardin, Williamson, Cheatham, and Sumner, and small parts of Maury and Davidson. The second includes the greater parts of Macon, Clay, Overton, Putnam, DeKalb, White, Warren, Coffee, and Franklin, considerable parts of Jackson, Cannon, Moore, and Lincoln, and small portions of Smith, Bedford, Van Buren, and Grundy.

As a cotton area the Highland Rim is of little importance, the most of it being referable to the "penumbral" region of cotton culture. It did not in all produce in 1879 more than 4,000 bales, and of this five-sixths was reported as the product of three counties, Hickman, Wayne, and Lawrence. The cotton yield of the entire division was not during the same year a third of that of Rutherford, a county of the Central Basin. And further, most of the cotton accredited to the three counties mentioned was not raised upon the highlands, but in the deep valleys traversing them—valleys which with their soils and rocks (those at least of Hickman and Wayne), can be regarded as ramifications either of the Central Basin on the one hand or of the Western Tennessee valley on the other. Thus, but little cotton came from the highlands proper. The exceptions are certain southern parts of Wayne and Lawrence and the cotton-producing land of the eastern subdivision, most of

the latter being on the highlands. It may be observed that the line separating the two chief cotton regions of Tennessee may be drawn at the western subdivision of the rim.

In this large division the depth of the soils, together with the underlying earth or *débris* down to the rocks, is often very great. This is seen in digging wells, in the railroad cuts, and in the great excavations made at the iron-ore banks, nearly all of which west of the Cumberland table-land are within the area of the rim. For the most part the soils and all the earthy matter below them have been derived from the decay of the underlying solid rocks in place. The exceptions are due to the occurrence here and there, often on the highest flats or summits, of spots in which the soils rest upon water-worn gravel, the latter being outlying patches of the orange sand drift. Often the worn gravel is mixed with the angular cherty *débris* which has never been transported.

There are two chief soils in this division, the *siliceous* and the *calcareous red clay*.

SILICEOUS LANDS.

The siliceous soil is thin, often light-colored, and rests upon a yellowish, sometimes reddish clay subsoil. It is, as a rule, gravelly, made so by the angular flinty *débris* of layers of the underlying formation, the latter in general a siliceo-calcareous rock, but often varying from a limestone in one locality to beds of massive chert in another. So far as the rocks and soils are concerned, extensive portions of the area of the siliceous soils, especially portions bordering the Central Basin, may be said to be "leached" sections of country; that is to say, sections more or less deprived of calcareous matter by the action of water. They are now regions of freestone water, and as such, in connection with their elevation and the fact that they often supply springs of sparkling sulphur water, present acceptable sites for summer retreats, both for invalids and for pleasure-seekers. The leached condition is indicated by the freestone water, the poverty of the soil, and the frequent occurrence of massive layers and bluffs of chert once interstratified with or containing calcareous matter.

The land in general is arable, yet sparsely cultivated, most of that in cultivation pertaining properly to the area of this soil lying in the shallow valleys of the smaller streams. The chief products

are Indian corn, wheat, oats and tobacco. Much of the area is in woods, presenting, indeed, in many parts, extensive flatwoods with open growth, chiefly oaks of moderate size. Many such sections are known as "the barrens." In dry places black-jack and scrubby red, Spanish, and black oaks are met with; in swampy areas, willow and water oaks; then again a better class of timber occurs, especially on slopes, such as white oaks, hickories, chestnut, poplar and sourwood.

It may be added that within the limits of the siliceous soil there are certain regions of variable extent whose soils approach in agricultural characteristics the calcareous red clay next described, and make, indeed, a transition from the siliceous to the red clay. In these transition areas the rocks making the red clay soil begin to appear. The areas may be found in both subdivisions of the rim, but occur most extensively on the midway highlands between the Central Basin and the western valley of the Tennessee river. But in these, as elsewhere within the limits of the siliceous soil, the lands mostly in cultivation are those of the valleys.

CALCAREOUS RED CLAY.

The calcareous red clay is one of the strong, fertile and durable soils of the State, ranking in many sections next to the blue-grass soils of Kentucky and Tennessee. It is a great tobacco, corn, and wheat soil in both the States mentioned and a good cotton soil in Alabama, and nearly one-third of the entire tobacco crop of Kentucky was produced in 1879 upon this soil. Montgomery and Robertson, the leading tobacco counties of Tennessee, have this for their chief soil. It is warm, mellow and easily tilled, much of which is due to its being tempered with the fine gravel and siliceous grains of crumbling chert. When first broken it is a brown loam from 4 to 6 inches deep, which changes to red by cultivation, becoming mixed with the red clay subsoil.

The rocks underlying the red clay soil belong to the St. Louis group of geologists. They are generally pale blue fossiliferous limestones, containing often cherty layers or nodules. By disintegration and decay these rocks supply, more or less abundantly, masses of leached, spongy, fossiliferous chert, which are scattered over the surface and through the earthy matter below, becoming, indeed, everywhere characteristic of this soil area. The red color

of the subsoil is due to iron oxide liberated by the halfway decay or leaching of the chert layers or of flints, which originally in the limestones were rich in iron.

A marked feature of the area of the calcareous red clay, and one well nigh universal, is the presence at the surface of hopper-shaped sink-holes. These are very numerous in the rim and highland regions of both Tennessee and Kentucky. They communicate with caves below, through which flow subterranean streams, the whole making an underground system of drainage of great extent.

A large section of this red clay range lies in Kentucky and Tennessee, chiefly within the great bend of the Cumberland river. Much of this in the south-western part of Kentucky, and reaching a little way into Tennessee, was formerly known as the "Barrens," and has a curious history. The following is from the first volume of Owen's *Geological Report of Kentucky*:

"In the early settlement of Kentucky the belt of country over which it [the red clay soil] extended was shunned and stamped with the appellation of "Barrens." This arose, in part, from the numerous cherty masses which locally encumbered the ground, in part from the absence of timber over large tracts, and in consequence of the few trees which here and there sprung up, being altogether a stunted growth of black-jack oak [black], red and white oaks. The value of the red calcareous soil of the "Barrens" is now (1856) beginning to be appreciated, so that lands which formerly were considered hardly worth locating are now held at \$25, \$30, and, in the neighborhood of some towns, even as high as \$50 an acre. At the present time the so-called "Barrens" of Kentucky are, to a considerable extent, timbered with the above varieties of oak, hickory, and occasionally butternut, black walnut, dogwood, and sugar-tree. The old inhabitants of that part of Kentucky all declare that, when the country was first settled, it was for the most part an open prairie district, with hardly a stick of timber sufficient to make a rail, as far as the eye could reach, where now forests exist of trees of medium growth obstructing entirely the view."

Another large and important section lies in a belt immediately west of the Cumberland table-land. This belt extends in both directions through Tennessee, northward into Kentucky and southward into Alabama. A limited and isolated area in Cannon and DeKalb counties occurs around the base of the Short mountains.

The growth of the red soil is chiefly oak; that of the "Barrens" is spoken of in the quotation given. Omitting the black-jack oak, many flat portions of the area of this soil in Tennessee, outside of the region referred to, have a similar growth. In sections with a rolling surface, on slopes and in the valleys the timber is often heavy. Good-sized oaks, white, black and red, abound, with more or less poplar, ash, black gum, walnut, and in places wild-cherry and sugar-tree.

THE CENTRAL BASIN.

The form and area of this important division, as well as its relation to the Highland Rim, have been previously given. This division is the most populous portion of Tennessee, and is the center of wealth and political influence, and in its varied agricultural capabilities is the garden spot of the State. It supplies, as before stated, one of the centers of cotton production. The soils are suited to the production of all the great leading crops. Indian corn is the chief product, and in this the basin is much ahead of any other division. Then, in the order of acreage cultivated, follow wheat, cotton, oats, rye and tobacco. Furthermore, in many sections pasture-lands abound, carpeted richly with "blue-grass" (*Poa pratensis*) and other nutritive grasses, on which live-stock of all kinds graze and mature.

The basin is mostly well defined on all sides by the steep escarpments of the highlands which surround it and rise from 300 to 500 feet above its floor. Their tops reach approximately the same general elevation, that of the Highland Rim making a high border, which, from favorable points within the basin, presents itself to the eye as a level wide-reaching horizon. The border, however, is a fringed one, made so by the multitude of ridges and spurs jutting in from the encircling rim.

The division is crossed by three rivers, the Cumberland, the Duck and the Elk, which descend from the eastern side of the rim, flow in a more or less westerly direction, and finally escape from the basin through comparatively narrow and often rugged valleys cut severally through the northwestern, western and southwestern sides of the rim.

It will aid in understanding the topography of the basin to state that if the narrow valleys or outlets through which the three rivers

mentioned make their escape were filled up to the general level of the highlands the entire basin would fill with water and become a lake 120 miles long and, fifty miles wide. At Nashville the water would be 300 or 400 feet deep, and one might sail over the city and never recognize its site. The summits of the highest hills in the basin would appear above the water as low, scattered islands.

The following counties and parts of counties lie within the division: All of Trousdale, Wilson, Rutherford and Marshall; nearly all of Smith, Davidson and Bedford; the greater parts of Sumner, Williamson, Maury, Giles, Lincoln and Moore; large parts of Jackson, Cheatham and Cannon, and small parts of Macon, DeKalb, Putnam and Coffee.

The surface of the basin is in the main rolling, but level tracts abound. Here and there, especially as summit lines, separating the areas drained respectively by the different rivers and creeks, ridges more or less conspicuous start up, whose slopes are green with grasses, or, when in the wild state, are heavy with timber. Then again, limited sections are met with which are hilly or made wild with groups of interlocking ridges. There is one great ridge, known as Elk ridge, which is remarkable, and merits notice. It is, in fact, an almost unbroken though narrow arm, running entirely across from one side of the Highland Rim to the other, and cutting off, as a well-marked division, the southern end of the basin. In general, it has about the elevation of the highlands, and presents in its course but very few low gaps. It is the summit of the watershed between the Duck and Elk rivers. On its northern side Elk ridge has but few spurs, and these are short. Its northern aspect faces the level or gently rolling regions of Maury, Marshall and Bedford, regions checkered with alternating cotton lands and cedar glades. On its southern side, however, it is different. Here, running out southerly toward Elk river and southwesterly toward Richland creek for five, ten and twenty miles, are grand sprays of bold ridges, which have exceedingly rich slopes, and were covered originally with heavy forests. The valleys between the ridges, like the greater valleys of the two streams mentioned, are noted for the strength and fertility of their soils. The subdivision south of Elk ridge embraces all of Giles, Lincoln and Moore counties within the basin, together with the southern end of Marshall. This whole region (not omitting the south and west sides respectively of the

valleys of Elk river and Richland creek) is remarkable for the multiplicity of its ridges and for its fertile and beautiful valleys, the latter often wide and open, supplying great bodies of first-class land.

Originally most of the area of the basin was covered with cane, and even now this grows spontaneously in open woods when protected from cattle. Large oaks, poplar, sweet-gum, walnut, hickories, hackberry, black locust, honey locust, ash, elms, beech, sugar maple, linden, dogwood and red-bud abound. The "cedar glades," a characteristic feature of the basin, are areas more or less detached or scattered, upon which grow, or have grown, great cedar forests. They may be estimated to have covered in the aggregate 300 square miles. The soil of the glades is often black or dark colored, with a reddish-yellow subsoil, frequently thin and much mixed with fragments of thin flaggy limestone, or the soil may be confined to the joint fissures (widened by erosion) of outcropping limestone in place, the bare rock making most of the surface. The true glades uniformly occur upon the outcrops of a particular bed of rock known as the "glade limestone," a thin-bedded, flaggy limestone with clay partings having a maximum thickness of 120 feet and belonging to the Trenton period. Where the soil is of sufficient depth the cedars grow tall, straight and of great size for the species (*Juniperus Virginiana*), now and then reaching eighty or ninety feet in height, with a diameter of three or three and half feet, and fair trees grow in soil among the loose rocks or in the earth of the fissures. Cedar timber standing in the woods has often been sold for \$100 per acre. The trade in cedar logs and lumber has been for many years, and is now, one of great interest in the Central Basin.

A great ring or belt of the cedar glades is found in Rutherford county. This belt incloses an oval area of red cotton lands which is 24 miles long and 12 miles wide. The line of the Nashville & Chattanooga railway lies nearly lengthwise across this oval, cutting the belt of glades on opposite sides. Murfreesboro is in the included area, a short distance east of the center. In Wilson county, and along Duck river in Bedford, Marshall and Maury counties, are many glades, which cover large tracts. These occur also in Williamson and Davidson counties. The glades very generally either surround or lie contiguous to one of two kinds of cotton

lands, sometimes, indeed, lying between bodies of the two kinds. One of these is represented by the red soil of Rutherford. Both will be considered hereafter.

The soils of the Central Basin, and the earthy layer of *debris* upon which they rest, have been in the main derived from the decay and disintegration of underlying rocks in place. The chief exceptions are the alluvial soils, which, however, may not aggregate the thousandth part of the whole. Exceptions are also found in the case of certain steep slopes, where *debris* from above has been washed or otherwise brought down upon the lower lands; but the exceptions are inconsiderable, and may here be passed over. The rocks underlying and giving origin to the soils (limestone of the Trenton period) are rich in fossil remains of plants and animals and in the materials of fertile soils. Locally, the strata appear to be horizontal or undulating; but complete sections across the basin show that they rise or swell up in a great dome, the top of which is in the central region of Rutherford county. From this central region the strata have been removed by denudation, and the dome has been decapitated, thus exposing the lowest rocks (limestones) of the basin. Here, then, the latter are to be seen and studied. Passing from this central area in any direction the approximately concentric belts of other outcropping limestones are successively encountered.

The limestones of the basin have in the aggregate a thickness of 1,000 feet, but the strata differ in certain particulars. All have impurities; some have an excess of sandy, others of clayey material in their composition; some abound in flints or chert, or in organic remains; one is thick-bedded, another thin-bedded; some disintegrate slowly, others rapidly. They are therefore grouped into subdivisions or kinds, each kind supplying a more or less characteristic soil. The kinds are enumerated below, beginning with the lowest, with notes:

1.—CENTRAL LIMESTONE DIVISION.

A series of limestones, 225 feet thick, chiefly heavy-bedded. They are light-blue or dove-colored rocks, fossiliferous, containing black or dark flints, especially the lower ones. The soil formed is a warm clay loam, brown when fresh, but becoming red (chocolate or copper-colored), like the subsoil, after several years' cultivation, and is known as a red soil. The subsoil is generally deep, and

rests often upon a gray, clayey bed, the rock following below at depths varying from 1 foot to 20 feet, with an average depth of about 10 feet. All the earthy matter above the limestone very generally contains fragments of decomposing flints. The soil and subsoil are mellowed by siliceous grains and gravel from this source, their color being derived from the iron of the flints. The native growth, representing well that of the entire basin, indicates strong land, this red soil being one of the best in Middle Tennessee for the culture of cotton. Lands having it, which we may call the "central lands," occur chiefly in Rutherford, Bedford and Marshall, and to a limited extent in Wilson and Maury counties, and generally lie well. The largest single body of such land is in Rutherford, and is the oval area inclosed in a belt of cedar glades already spoken of. Fine level areas, the lands alternating with cedar glades, are found throughout Marshall and in the northwesterly part of Bedford. The following analyses are given of samples of soils of the central limestones that were never in cultivation. The region from which they were taken is gently rolling, and where trees do not interfere, a slight elevation is sufficient to give the eye a range over a great extent of country. The depth of soils in this region varies from nothing, on rocky spots, to 15 or 20 feet, with an average depth of about 10 feet (C. F. Vanderford). The red subsoil varies from 2 to 5 feet in thickness. Under this we have a bottom bed of a more plastic light yellow or gray clay containing more or less angular flinty gravel or decaying chert, often easily cut with the spade.

No. 1. *Red clay soil*, taken from a wood-lot near Florence station, Nashville & Chattanooga railroad, a little less than 7 miles northwest of Murfreesboro, Rutherford county. Depth taken, 7 inches; growth, species of hickory, red, white and post oaks, elms, ash, honey locust, black walnut, wild cherry, sugar-trees, poplar, hackberry, red-bud, dogwood and pawpaw. Originally covered with cane.

No. 2. *Subsoil* of the above, taken at a depth of from 7 to 15 inches.

Nos. 3 and 4 are a *soil* and *subsoil* from near the same locality.

No. 7. *Red clay soil* from J. W. Burton's place, 3 miles north of Murfreesboro, Rutherford county, taken 7 inches deep. The vegetation is about as that given above.

No. 8. *Subsoil* of the above, taken at a depth of 7 to 15 inches.

Red Clay Lands of the Central Basin, Rutherford County.

SEVEN MILES NORTHWEST OF MURFREESBORO.				THREE MILES NORTH OF MURFREESBORO.	
Soil.	Subsoil.	Soil.	Subsoil.	Soil.	Subsoil.
No. 1.	No. 2.	No. 3.	No. 4.	No. 7.	No. 8.
Insoluble matter Soluble silica..... Potash Soda..... Lime..... Magnesia..... Brown oxide of Manganese..... Peroxide of iron..... Alumina..... Phosphoric acid..... Sulphuric acid..... Water and organic matter.....	79.580 } 83.208 3.628 } 66.092 } 77.789 11.697 } 0.150 } 0.508 0.065 } 0.088 3.054 } 0.119 0.029 } 0.204 0.195 } 0.272 3.420 } 0.837 4.988 } 10.299 0.242 } 0.305 0.089 } 0.079 4.962 } 3.728	80.350 } 86.116 5.266 } 81.670 } 87.750 6.080 } 0.140 } 0.211 0.034 } 0.033 0.510 } 0.161 0.024 } 0.301 0.175 } 0.167 3.708 } 3.613 4.173 } 6.220 0.207 } 0.056 0.102 } 0.008 4.784 } 1.966	75.350 } 82.660 7.310 } 81.670 } 87.750 6.080 } 0.211 } 0.255 0.033 } 0.258 0.161 } 0.340 0.301 } 0.296 0.167 } 0.038 3.613 } 5.184 6.220 } 5.567 0.056 } 0.079 0.008 } 0.072 1.966 } 4.962	76.470 } 82.480 6.010 } 0.251 } 0.050 0.050 } 0.142 0.142 } 0.074 0.074 } 0.149 0.149 } 4.773 4.773 } 7.774 7.774 } 0.056 0.056 } 0.072 0.072 } 4.230	79.718 } 100.051 } 7.29 } 7.93 22.2 C.° } 22.2 C.°
Total.....	100.402	99.973	100.476	99.718	100.051
Hygroscopic moisture.....	8.64	7.23	5.59	7.29	7.93
absorbed at.....	23.9 C.°	23.9 C.°	17.2 C.°	22.2 C.°	22.2 C.°

[In the foregoing analyses the first two soils (Nos. 1 and 3) resemble each other very strongly in every regard except their large lime percentages, which may be due in the case of No. 1 to some local circumstance, such as undecomposed particles of limestone, the country rock. Both soils may be considered as being fairly supplied with potash and heavily so with phosphoric acid, and, in the presence of so much lime, should be exceedingly thrifty. There is, however, a great difference in their subsoils, soil No. 1 being supported by a heavy clay, rich in phosphoric acid, extremely so in potash, though having a small and insufficient amount of lime. Soil No. 3, on the other hand, rests upon a subsoil less clayey in character, containing a fair percentage of potash, but very deficient in phosphoric acid, an unusual thing for clay subsoils. The deficiency in lime in both subsoils is accompanied by increased percentages of magnesia, which, in the surface soils, is extraordinarily low. In volatile matter and hygroscopic moisture the difference between the two subsoils is due to their clayeyness, and throughout are satisfactory. The soil and subsoil from nearer Murfreesboro both fall very short in their percentages of phosphoric acid, though they are fairly supplied with other necessary constituents.—E. W. H.]

2.—CEDAR GLADE LANDS.

Next above the central limestones follow the thin-bedded flaggy limestones, making the *cedar glades* already spoken of. The soils of this division have been noticed. Where these are deep enough, and the cedar stumps and loose flags permit it, the land in the middle and southern portions of the basin is often cultivated in cotton. In general, however, comparatively little of it is produced upon the areas of the "glade limestones."

3.—CARTER'S CREEK LIMESTONE LANDS.

Resting upon the flaggy limestones next comes a heavy-bedded rock, which, owing to its conspicuous outcrops on Carter's creek, in Maury county, I have called the *Carter's Creek limestone*. It is also known as the *Woodbury limestone*, this county town being built upon it. The rock is light-blue in color, containing siliceous fossils and more or less chert, and is in all nearly 100 feet in thickness. Where the surface lies well, and is level or gently rolling or sloping, this rock often supplies a good agricultural country.

Areas underlaid by it occur in all the counties within the basin, and it underlies much of the surface outside of the "cedar glades" in the counties of Wilson, Rutherford, Bedford, Marshall, Maury and Williamson. Excepting a few limited and unimportant spots, it is the lowest rock appearing at the surface in Smith, Trousdale, Sumner, Davidson, DeKalb, Cannon, Lincoln and Giles counties. The soil above it is, when fresh, brown or dark; the subsoil is yellowish or reddish-yellow, rather clayey, and contains gravelly chert. It has not the markedly red color of the subsoils and warm soils of the central limestones. In the main, the lands of the Carter's creek limestones, as compared with the central limestones, are second class. They do not generally lie so well, are often hilly, and are more frequently broken by rough, rocky places ("rocky roughs"); upon some of which cedars grow, making outliers of the true glades. Yet there are many sections where, topography being equal, they are little inferior to the central lands in tilling qualities and fertility. Both kinds of lands are often confounded with the true glade lands, all being designated "cedar lands." This is due to the fact that the central and Carter's creek areas adjoin the glades, the first concentrically within and the second without, or are locally and irregularly interlocked with them. A considerable proportion of the best of them, commencing with Wilson county and going southward, are cultivated in cotton with good results.

4.—ORTHIS LIMESTONE LANDS.

A series of sandy limestones from seventy to one hundred feet in thickness, which we shall call the *Orthis bed*, follows in ascending order. In certain sections of the basin, as about Nashville, the upper portion of this series is a remarkably laminated current-formed rock of about twenty-five feet in thickness, made up in general of comminuted shells or "shell sand." The grains are generally calcareous, but are much mixed with siliceous grains. This portion has been named the *Capitol limestone*, as it supplied the stone for the capitol at Nashville. The lower and much the greater portion, as well as the persistent portion (being found in its geological horizon throughout the basin), is the *Orthis bed proper*, so named because at most points it is well filled with individuals of a fossil shell having about the diameter of a dime, known to geologists as *Orthis testudinaria*. The bed is, in general, a sandy or siliceous,

often shaly, calcareous rock, and when freshly quarried is light blue in color; but upon thorough weathering it becomes a yellowish sandy shale or a porous sandstone, and blocks of the latter are often met with on slopes. Sometimes these blocks, when broken, show a blue unchanged nucleus within. The usual thickness is from fifty to seventy-five feet. In the eastern part of Williamson county, however, as about Triune, there is a local thickening of the bed, it becoming 150 feet thick or more. Owing to its sandy or siliceous nature, the rock has a degree of weather-resisting power, and hence contributes local plateaus and terrace and level lands to the topography of the basin. These local features are best seen west of the central areas of the basin in Wilson, Sumner, Davidson, Williamson and Maury counties, and include some of the fairest and best farming tracts in Middle Tennessee. The soil, when first cultivated, is a rich brown loam, with a subsoil usually yellow, but sometimes reddish-yellow. The latter also is often made more or less gravelly by thin, sandy fragments, the *debris* of the disintegrated rocks. This soil is mellow, warm, well drained and easily cultivated—characteristics which make it a favorite cotton soil—and its areas are generally known as poplar lands, the so-called “poplar” (*Liriodendron*) being, or having been, a very characteristic tree of its forests. Its growth, besides poplar, includes beech in places, especially on the slopes and in the heads of hollows, ash, sugar-tree, oaks, elms, dogwood, hickories, hackberry, black walnut, linden, box elder, and other species, the variety being remarkably great. It must be stated, however, that the lands of this bed are not uniformly good, for tracts occur, especially on the slopes and ridges, where the soil has been washed or leached or otherwise impoverished, and the lands reduced to third rate, supporting an uninviting native growth. In cultivated fields in rolling or hilly regions especially if old, it is no uncommon thing to see naked, badly washed, and “scalded” places with soil all gone, spotting at intervals along the slopes the horizontal line of the outcrop of the bed. These bare places are made so by careless cultivation and inattention.

The following analyses are given of lands of this region, the samples being obtained from localities lying well, and among the best and most beautiful agricultural sections in the State :

No. 11. “*Poplar*” land soil from Vanleer Polk’s place, Maury
6—Ag.

county. Depth taken, eleven inches; timber growth, "poplar," sweet gum, walnut, oak, ash, elm, hackberry, honey-locust and dogwood. Originally covered with cane.

No. 12. *Subsoil* of the above, taken at a depth of from eleven to twenty-three inches.

No. 13. "*Poplar*" *land soil* from the Hermitage, Davidson county. Depth taken, ten inches; timber growth about the same as that of soil No. 11.

No. 14. *Subsoil* of the above, taken at a depth of from ten to twenty-two inches.

Poplar lands of the Central Basin.

	MAURY COUNTY.		DAVIDSON COUNTY.	
	Vanleer Polk's Place.		Hermitage.	
	Soil.	Subsoil.	Soil.	Subsoil.
	No. 11.	No. 12.	No. 13.	No. 14.
Insoluble matter.....	79.270 } 84.742	78.340 } 81.871	78.880 } 85.760	75.100 } 84.080
Soluble.....	5.472 }	8.531 }	6.900 }	8.990 }
Potash.....	0.319	0.327	0.238	0.584
Soda.....	0.059	0.080	0.047	0.114
Lime.....	0.515	0.547	0.378	0.468
Magnesia.....	0.342	0.358	0.368	0.444
Brown oxide of manganese....	0.040	0.088	0.083	0.054
Peroxide of iron.....	3.683	5.285	2.627	3.683
Alumina.....	5.294	7.120	6.066	6.979
Phosphoric acid.....	0.349	0.342	0.255	0.318
Sulphuric acid.....	0.192	0.107	0.085	0.066
Water and organic matter....	4.549	3.372	4.498	2.453
Total.....	100.084	99.497	100.415	99.223
Hygroscopic moisture.....	8.62	11.43	10.02	10.00
absorbed at.....	29 C.°	29 C.°	28.2 C.°	28.2 C.°

[The common and prominent characteristics of all of these poplar soils is a very unusually high percentage of phosphoric acid, accompanied by a large supply of lime—two prime conditions of thriftiness and durability. The supply of potash also is ample, and with a high hygroscopic power and easy tillage shows them to be altogether excellent soils.—E. W. H.]

5.—MULATTO LANDS OF THE NASHVILLE SERIES.

In this subdivision we include all the remaining Silurian limestones above the *Orthis* bed. The series in the northern part of

the basin, is from 400 to 500 feet in thickness, but in the southern and southwestern part its thickness is much reduced. Here, too, its lowest layers often contribute to the topmost of the *Orthis* bed in making the underlying rock of many nearly level and superior agricultural tracts. It is in the main a sandy or earthy highly fossiliferous limestone, containing in its composition all the inorganic and some of the organic elements of exceedingly fertile and mellow soils. It is named, by way of distinction, the *Nashville series*, being well displayed about the city, especially on the higher grounds. The area of the outcrop of these rocks, and hence the area of the soils derived from them, sweeps around the basin in a ring or circular belt outside of the concentric outcrops and soils of the limestones already mentioned. This ring is much the wider on the western and southern sides, and supplies large and valuable tracts of land in the counties of Trousdale, Sumner, Davidson, Williamson, Maury, Giles, Lincoln and Moore. The surface is in places level or gently rolling; then it becomes hilly, especially as we go westward toward the limit of the basin. On the eastern side, in Smith, DeKalb, the southeastern part of Wilson, Cannon, the southern part of Rutherford, and the eastern part of Bedford, the ring is not so wide. Here, however, numerous beautiful valleys and tracts occur, many of which, as we approach the eastern side of the basin, are separated by high ridges with exceedingly rich and fertile slopes. In fact, the sides of the basin all around are fringed with bold spurs, whose limestone slopes have unsurpassed fertility of soil. With these may be included the slopes of such high knobs and ridges as exist within the basin. Of the latter, Elk ridge, already spoken of, with its northern face and declivities in the southern parts of Maury, Marshall and Bedford, and its southern ramifications in Giles, Lincoln and Moore, is a noted example. Altogether, the aggregate area of the lands of the *Nashville series* must be one-half or more of the entire area of the basin. The soils are mulatto-colored loams with yellow subsoils, the latter tempered with cherty gravel and siliceous remains of fossils. Approaching the spurs and ridges, we often find the soils and subsoils of the slopes much mixed with gravelly *debris* that has been washed down or otherwise brought down from the siliceous subcarboniferous rocks that cap these jetting arms of the highlands. The growth presents a rich flora, including many species, among which may be mentioned great bur or overcup oaks, elms, ash, hickories, linden,

black walnut, cucumber-tree, mulberry, cherry and, on hill sides, yellow wood, coffee trees, butternut, and black locusts. Excepting in the more southern counties of the basin, the soils of the series are not considered as among the best for cotton, as the plant grows too luxuriantly, and does not mature in season. In Giles and Lincoln, however, they are, with the creek and river bottoms, chiefly relied upon for the production of cotton. In the southern part of Marshall, and in some parts of Maury and Williamson also, a good share of their areas is devoted to cotton culture. The following analyses are given of samples of this land:

No. 9. *Mulatto clay soil* from Belle Meade, a few miles west of Nashville, Davidson county. Depth taken, eight inches; timber growth, oaks, elm, hickory, ash, linden, sugar maple, hornbeam, walnut, cherry, dogwood and red-bud. Originally with an undergrowth of cane.

No. 10. *Subsoil* of the above. Depth taken, eight to twenty inches.

No. 6. *Subsoil* from near the above. Depth taken, eight to twenty inches.

Mulatto clay lands of Nashville, Davidson County.

	Soil.		Subsoil.		Subsoil.	
	No. 9.		No. 10.		No. 6.	
Insoluble matter	56.540	} 65.380	47.950	} 58.960	54.932	} 65.472
Soluble silica.....	8.840		11.010		10.540	
Potash.....	0.468		0.752		0.242	
Soda.	0.108		0.174		0.054	
Lime	6.540		8.382		3.015	
Magnesia.....	0.569		0.615		0.675	
Brown oxide of manganese.....	0.187		0.091		0.152	
Peroxide of iron.....	7.286		9.584		9.761	
Alumina.....	12.419		17.303		16.272	
Phosphoric acid.....	0.563		0.355		0.175	
Sulphuric acid.....	0.156		0.188		0.119	
Water and organic matter.....	6.318		3.591		4.208	
Total.....	99.994		99.995		100.145	
Humus.....	1.676		.....		.....
Available phosphoric acid.....	0.179		.....		.....
Hygroscopic moisture.....	10.55		11.01		9.70	
absorbed at.....	26.6 C. ^o		26.6 C. ^o		17.3 C. ^o	

[The extraordinary percentage of phosphoric acid in soil No. 9 and its subsoil (the former exceeding all others heretofore analyzed), together with the unusual predominance of lime and large supply of potash, shows sufficient cause for the high estimate placed upon their productiveness, and gives promise of almost indefinite durability.—E. W. H.]

The following mechanical analysis has been made of the mulatto clay subsoil No. 10, of Belle Meade, near Nashville, by M. E. Jaffa, of the University of California :

	Per cent.
Clay.....	27.930
Sediment of less than 0.25mm by hydraulic value.....	29.203
Sediment of less than 0.25mm by hydraulic value.....	4.315
Sediment of less than 0.50mm by hydraulic value.....	6.799
Sediment of less than 1.00mm by hydraulic value.....	5.802
Sediment of less than 2.00mm by hydraulic value.....	3.390
Sediment of less than 4.00mm by hydraulic value.....	2.994
Sediment of less than 8.00mm by hydraulic value.....	6.967
Sediment of less than 16.00mm by hydraulic value.....	3.936
Sediment of less than 32.00mm by hydraulic value.....	5.096
Sediment of less than 64.00mm by hydraulic value.....	0.495
Total.....	96.927

THE CUMBERLAND TABLE-LAND.

Leaving the Central Basin, and crossing the eastern division of the Highland Rim, we reach the foot of the western escarpment of the Cumberland table-land, an elevated and sharply outlined division of the State. This is usually called Cumberland mountain, but it is better designated as table-land. It is, as already said, a plateau with broad and generally level top, standing in bold relief above the lowlands on each side, the rim lands on the west and the East Tennessee Valley lands on the east rising up, in round numbers, 1,000 feet above these and 2,000 feet above the sea. It is the Tennessee coal field, and embraces an area of 5,100 square miles—about one-eighth of the State. Within its limits are included Scott, Morgan and Cumberland counties, and the greater parts, severally, of Fentress, Van Buren, Grundy, Bledsoe, Sequatchie, and Marion, with considerable portions of Overton, Putnam, White, Warren, Coffee, and Franklin on the west, and of Claiborne,

Campbell, Anderson, Rhea, and Hamilton on the east. The western edge of the division is notched and scaloped by deep coves and valleys, which are separated by finger-like spurs pointing westward, while its eastern edge is a nearly direct or gracefully curving line. At almost all points, on both sides, the surface suddenly breaks off in sandstone cliffs from 20 to 200 feet in height, giving everywhere a sharp and prominent margin or brow to the division. Commencing in the very body of the division, near the middle of the State, and extending southwestward into Alabama, the table-land is completely split longitudinally in two by the deep Sequatchie valley, a narrow, straight trough, 60 miles long, and averaging not more than 4 miles in width, if as much. Of the two arms thus formed, that to the west of the valley mentioned retains the name Cumberland, while that to the east is known as Walden's ridge.

The surface of the table-land is often flat for miles, with an open growth, mostly of oaks; then again it is rolling and diversified with hills and shallow valleys. In the northeastern part are high ridges, which may be regarded as mountains on the table-land. The division is very generally capped with sandstone, and shales are sometimes met with. The soils are thin, sandy and porous, and are decidedly poor as compared with the limestone regions we have considered. In some sections they afford a pasturage of wild grasses. Apples and grapes often do well, and so do garden vegetables and Irish potatoes, with plenty of manure. Here and there, on slopes at the foot of knobs or ridges and along streams, more fertile areas are found, where land is cultivated, but in the aggregate farming operations on the table-land amount to very little. In general, the population is sparse, and wide regions without an inhabitant are traversed. The mountain, however, has attractions outside of its agricultural features which have drawn to certain localities many enterprising men, resulting in the building up of towns and intelligent communities. A very great accession is the establishment of the University of the South at Sewanee.

We pass now from the sandy top of the table-land to the rich limestone declivities which make its sides. Below the great cap of the mountain—a cap made up of sandstones, shales, and coal-beds interstratified—there is everywhere a great limestone bed, known as “mountain limestone,” whose strata outcrop on all sides. The outcrops along the western side or slopes, which have more agricul-

tural importance than the eastern, make at least two-thirds of the ascent from the base up. The surface is generally rocky, with very little soil. At intervals, however, bodies of land are met with which are rich and fertile. Not much of this land has been brought into cultivation, but now and then a small farm or a field shows itself as an open spot among the trees on the face of the ascent as one travels the lowland roads parallel with the mountain. The slopes are, in the main, covered with heavy forests, the trees, often of large size,—poplar, black and white walnut, white oak, linden, mulberry, hackberry, species of ash, cherry-tree, together with the cucumber-tree, the great-leaf magnolia, papaw, and others—making a rich forest flora.

North of McMinnville a bench or terrace is very generally to be seen running along the slopes of the table-land and about half-way up. This comes from a thin sandstone, which in this region is interpolated in the series of mountain limestones. Immediately west of the main mountain and its outliers are many flat-topped ridges and "little mountains," which have the same height as the benches, and are capped with the same sandstone. The flat summits of all of these have a rich, mellow soil, often sandy, upon which corn and wheat grow luxuriantly, and present favorite areas for orchards. Cotton, which is now occasionally seen in "patches," would, in a more southern climate, do well upon them. We add, that at the foot of the main mountain, as well as around the outliers, there is often much good land. This is especially true of the coves, some of which are noted for rich and beautiful farming areas. Going westward, these soils soon run into the red clay soils of the Highland Rim; in fact, they, as well as the soils of the steep mountain slopes, might have been considered consecutively after the red soils of the rim, since their underlying limestones belong to the same group, the sub-carboniferous. In the southern part of the State cotton was formerly cultivated to a considerable extent in the coves and elsewhere along the base of the mountain, but now but little of it is raised.

THE VALLEY OF EAST TENNESSEE.

Passing in our course eastward the Cumberland table-land, with its flat areas, oak woods, and sandy soils, we find ourselves in the

great and populous valley of East Tennessee, with its diversified rocks, soil and scenery. (a) This division has been briefly characterized on a former page. Within it is embraced nearly all the agricultural wealth which is usually accredited to the civil division we call East Tennessee. Its area extends through the State from Virginia to Georgia, and is included between the Cumberland table-land on the west and the Unaka mountains on the east or south-east, its lateral limits being clearly defined by these mountains. (b) It includes the following counties and parts of counties : The whole of James, Bradley, McMinn, Meigs, Loudon, Roane, Knox., Jefferson, Union, Grainger, Hamblen, Hancock, Hawkins, Washington, and Sullivan, parts of Marion, Sequatchie, Bledsoe, Hamilton, Rhea, Anderson, Campbell, and Claiborne (the other parts of these being on the table-land) and parts of Polk, Monroe, Blount, Sevier, Cocke, Greene, Unicoi, Carter, and Johnson (the remaining portions of the latter making up the area of the Unakas). Measured directly across in the northern part of the State, the area is 55 miles wide or thereabout. Toward the south the mountain barriers approach each other, and the width is reduced approximately to 34 miles, not including the outlier, Sequatchie valley. As seen from the high points of the Unaka mountains the valley of East Tennessee presents a wide-spreading floor—a vast, nearly level plain, limited on the west in the distance by the wall-like eastern escarpment of the Cumberland, and having but a few

(a) It may be noted that the Cumberland table-land, rising so boldly above the general level of the State, separates two of the great sections of Tennessee—sections great in area, wealth and population : the Central Basin, with the best of the rim uplands around it, on the west, and the valley of East Tennessee on the east. The comparatively barren table-land has always been a serious obstacle in the way of free intercourse between these sections. Even now no railroad crosses it within the State. To pass from Nashville to Knoxville it is necessary to make a great detour to the south through Alabama.

(b) I include in this division, as outliers, the interesting valleys and coves which are, more or less, interlocked with the ridges of the mountains on each side. One of these, Sequatchie valley, splitting the southern portion of the table-land, has been spoken of. On the eastern side there are many, some of them noted for the attractiveness of their natural features. The cultivated part of one county, Johnson, in the northeastern part of the State, is a mountain-hemmed cove, with no way of getting in or out except by scaling mountains or by passing through dark and rocky water-gaps. Other interesting coves are Wear's, in Sevier county, and Tuckaleechee and Cade's, in Blount county.

isolated ridges, like long narrow islands, projecting above the general surface. But when we descend from the mountains and travel across this floor it is anything but a level plain, the whole becoming an area fluted with a multitude of smaller valleys and ridges—a furrowed field on a Titanic scale. The valleys and ridges are crowded together, and extend in parallel lines to the northeast and southwest, the prevailing directions in the valley of East Tennessee. The smaller streams take, in the main, either the one or the other course. The rivers flow to the southwest, or, in the case of those from North Carolina, make their way across the country by the shortest routes through gaps and breaks of the ridges to those that flow to the southwest. The railroads and other chief lines of travel and commerce run with the valleys. This northeasterly and southwesterly striation, if I may use the word, of the great valley, so far as its natural and many of its artificial characteristics are concerned, is strikingly seen on the geological and topographical as well as agricultural maps of the State. This is all due primarily to the fact that the rocky strata are greatly inclined or tilted so that their edges outcrop along the surface, which they do in northeasterly and southwesterly lines. Thus the rocks present themselves at the surface in long, narrow, parallel strips or belts with the trend indicated. The hard, strata-like sandstones and cherty dolomites make the ridges; the soft, like limestones and shales, the valleys. The several soils of the valleys and ridges necessarily occur in strips. Some of the valleys or valley ranges, though averaging hardly a mile in width, may be traced, or indeed traveled in, from Virginia to Georgia, a distance of 150 miles, to say nothing of their extension either way beyond the limits of the State. Certain ridges, straight or slightly curving, are equally long, and most of them may be followed for scores of miles. Some ridges are narrow and sharp, like a steep roof; others are wide, broadly rounded on top, and of far greater importance, of which Copper, Chestnut and Missionary ridges are types. These are dolomite ridges, and their surfaces are strewn with cherty masses and gravel. The ridge upon which Knoxville is built is one of the latter, a range originating in the northern part of Knox county and traceable into the State of Georgia. Ridges of this type occasionally flatten out, giving us plateau areas of great agricultural value, such, for example, as the body of land traversed by the East Tennessee and Virginia rail-

road in Jefferson and Hamblen counties, or break up more or less into wide belts of cherty knobs, as those in Hamilton and Rhea, between the Tennessee river and the Cincinnati railroad, or those in Hamilton and James east of Missionary ridge, and crossed by the Chattanooga and Cleveland railroad. But these cherty dolomite knobs are not the only ones. The kinds of knobs characterizing the two areas are designated respectively as the "red belt" and the "gray belt," and differ in a degree from each other. The *red belt* begins in Jefferson county, has its greatest width in Knox and Blount, and continues southwestward through other counties to the Georgia State line. This area is remarkable for its long lines of red knobs and red lands. With the lines of knobs are intervening broken valleys. The soils are based upon calcareous shales, with which are interstratified very ferruginous sandy limestones, flaggy limestones, and red marbles. They are often very mellow and fertile, as upon the slopes of the knobs. The *gray belt*, so named from the prevalence of gray lands and earthy gray rocks, lies further to the eastward. It is a great club-shaped area commencing on the Virginia line and extending southwestward to the Hiawassee river, reaching, indeed, nearly through the State. Its characteristic feature is found in its isolated and often crowded knobs, which beset the surface like monster aunt-hills. Many portions of the belt are spoken of locally as "the knobs." These are conical hills of all heights, from 100 to 500 feet, and sometimes they are more or less elongated, forming short ridges; and in some regions where closely set, they make a wild country traversed by narrow labyrinthine valleys. The formation of the area is a heavy body of sky-blue, calcareous, and often sandy shales, weathering to yellowish gray, or buff, and containing occasionally thin flaggy limestones, and at some points thin sandstones. The belt often possesses a dark rich soil, supporting a growth of white oak, poplar and hickory, and some portions abound in small farms between the knobs and on their slopes. In such regions we have what has been called "the poor man's rich land."

If we draw a line from Virginia to Georgia lengthwise through the middle of the great valley, splitting it into halves, the knobby belts we have just described will lie in the eastern or southeastern half. Besides these, there are in this part many ridges and valleys based on other rocks. It is, however, in the other half of the valley,

on the northwestern side of the median line, that we have the most characteristic display of the wonderfully long, yet narrow, parallel, and alternating valleys and ridges. The length of these has already been referred to. I add a word more as to the valleys. These are troughs between the ridges, and are wide or narrow in proportion to the separation of the latter. They vary in width from the fraction of a mile to 1 mile or 2 miles, not often more than this, and most of them are attractive and fertile. Some of the narrow ones are cold and unproductive. There are two principal classes, as will be hereafter noticed, the limestone valleys and the shale valleys, and both kinds in general are amply watered by streams abundantly supplied with free-flowing springs, well populated, abounding in arable fields. Each valley is a kingdom in itself, communities being separated from each other by the intervening ridges. Most of the population live in the valleys, though houses and farms are occasionally seen upon some of the ridges of the Copper Ridge type. For the most part, the ridges are the wooded portions of the country. Seen from a distance, they are marked out by lines of forests crowning the summits, which heighten the contrast between ridge and valley. The fields of the valleys often creep a long way up the slopes to the line of the trees.

For present purposes enough has been said as to the general character of the valley of East Tennessee. To go into detail, enumerating and describing all its numerous and varied features of structure and surface, would carry us far beyond reasonable limits. (a) Such detail can be dispensed with the better since the valley is not a cotton region proper. It belongs at most to the *penumbral region* of cotton culture. The whole yield reported for the census year, including also the little cotton raised in the mountain parts of such of its counties as reach out, respectively, upon the table-land and the Unakas, is only 537 bales, and of this more than 400 bales were raised in the valley portions of counties south of the latitude of Knoxville. In nearly all the counties quarter-acre or half-acre patches are occasionally met with, in which a little cotton is cultivated for home use.

The "*limestone lands of certain valleys in East Tennessee*" make some of the best agricultural belts of the division. They have

(a) For further information as to the physical and agricultural features of this division, see the writer's *Geology of Tennessee*.

blue limestone soils, the equivalents of the soils in the Central Basin, and nearly all the important valley ranges on the western or north-western side of the median line of the division have these soils. Such are the valleys known as Powell's, Beaver creek, Raccoon, Hickory, Savannah, and others. They make the long valley ranges to which attention has been called, and are everywhere in cultivation and dotted with farm houses. Toward the south, and before reaching the Georgia line, most of these valleys are pinched out, giving way to shale valley ranges or to ridges. On the east or southeast side of the median line there are very few of these, and they are unimportant. The "*calcareous shale and valley lands*," belong to a group of valleys equal in importance to those just mentioned. The rocks which supply the soils are variegated, chestnut-colored, greenish and buff shales, generally calcareous, and show now and then an interstratified layer of dolomite or limestone. This series is called *Knox shale*. Many of the valleys are very desirable agricultural belts. In the southern part of the division especially a number of them are wide, gently rolling or level, and afford tracts of highly fertile land, often in a good state of cultivation. It is one of the important soils upon which cotton is cultivated. The soils are clayey, but are mellowed by the *debris* of thin sandy layers and by calcareous matter. On the west side of the median line the shale valleys, or valley ranges, when followed northeastward up the country, become very much narrowed, losing their importance. This is also the case to some extent on the eastern side of the valley. The "*magnesian limestone lands*" are those of level or rolling plateau belts, or of moderate slopes based on dolomites, and such as that above-mentioned traversed by the railroad in Jefferson and Hamblen counties. There are but few of these areas, and these are chiefly in the upper end of the valley. These soils are strong and fertile, and under cultivation. The subsoils are deep yellowish or reddish, and contain cherty gravel and masses of chert. These areas I have spoken of as dolomite ridges flattened out into plateau land. The "*ridge and cherty lands*" are those of many wide and rounded dolomite ridges in the valley, of which Copper, Chestnut, and Missionary ridges, before mentioned, are good examples. In these the rocky strata are usually concealed by a great depth of clayey, reddish subsoil, in which there is much chert and cherty gravel intermixed. The surface of the ridges is

often so covered with flinty gravel as to supply natural macadam road-beds, over which it is pleasant to drive. The wooded summits, the encroachments of the cultivated fields upon the slopes, and the presence occasionally of houses and farms upon the ridges, have been referred to. In regard to alluvial lands, bottoms occur at intervals along the streams, there being noted ones on the French Broad, the Holston, Tennessee, and other rivers. The aggregate of such land, however, though very considerable, is limited in this division as compared with what we have in the western part of the State.

Sequatchie valley is the most important outlier of the valley of East Tennessee. Its relation to the Cumberland table-land or mountain has been given. As stated, it is a narrow, straight trough, 60 miles long, with an average width of not more than 4 miles, and lies compressed between the steep and parallel walls or edges of the table-land, which rise on both sides to an elevation of 1,000 feet and overshadow its area. Looking from these heights down upon the valley below, we see first a central, depressed, wide, and wooded ridge, running as far as the eye can reach lengthwise through the valley, and constituting the greater part of its surface, and then two cultivated valleys, one on each side of the ridge, between it and the foot of the mountain slopes. The rocks of the central ridge are dolomites, like those of Copper and Chestnut ridges in the main valley to the east, to which class of ridges it belongs, the cherty lands, native growth, etc., being similar. The valleys have strong soils based on blue limestones, and give a large aggregate of good farming lands. That on the eastern side, in its rocks and soils, is to be referred to the class of valleys, including Powell's, Beaver creek, Raccoon, and others, before mentioned. That on the west side has frequently more cherty limestones (mountain or St. Louis) for its underlying rocks. The Tennessee river, breaking through the eastern arm of the mountain, enters the southern end of the valley, and then flows in the extended course of the latter far into Alabama. Sequatchie river runs through the whole length of the valley, winding along for the most part, very curiously, in the ridge area, breaking up the latter here and there into hills and knobs.

But three reports have been received from counties in the valley of East Tennessee, abstracts of which have heretofore been given.

As to the first it may be noted that Chickamauga is near the Georgia line. Dolomite cherty ranges, as well as a valley of the Knox shales, pass through this region.

THE UNAKA MOUNTAIN REGION.

We have now reached the last of the eight natural divisions of Tennessee, the *Unaka mountain region*. The general character of the division, its position, elevation and area, have been briefly given. It embraces the mountainous parts of Polk, Monroe, Blount, Sevier, Cocke, Greene, Unicoi, Carter and Johnson counties. Including interlocked valleys and coves, the region is a long belt, with a width of about 13 miles, lying contiguous to the State of North Carolina, and reaching from Virginia to Georgia. It gives to the eastern end of Tennessee a greatly raised, cloud-capped border, strikingly in contrast with the low and often flooded plains of the western end. The included valleys and coves having been referred to and treated as outliers of the division last described, we are concerned here mainly with the mountains proper. The great ridges embraced in the division, and often named the Unakas, are arranged approximately in two principal chains, which are more or less crowded together in parallel lines. The chains are not continuous. The main one, the axis of the group (of which Catface mountain, the Yellow, the Roan, the various "Balds," the Great Smoky and the Frog are some of the prominent points), is cut directly across by rivers, seven in number, which flow from the western slope of the Blue Ridge in North Carolina northwestward into Tennessee, passing the great axis in deep and magnificent water-gaps. The most westerly chain, of less average height (to which belong Star's, Chilhowee, English's, Meadow Creek, Holston, and other mountains), was elevated by the original geological forces in detached ridges, often many miles apart, but arranged lengthwise, and facing end. Nevertheless, some of the isolated mountains—Star's and Chilhowee, for example—are cut in two by water-gaps. The portion of the main axis between the French Broad and Little Tennessee presents in its length of 65 miles a series of peaks but a few feet lower than the highest of the Black mountains in North Carolina. Many of these exceed 6,000 feet. Altogether, we have here without exception the boldest and greatest mountain mass to be found anywhere east of the Mississippi river, known as the Great Smoky. Farther to the northeast, in the section between

the Watauga and Nolichucky, are several great ridges, among which we may mention the Roan. This, though not having the highest peaks, is in some respects the grandest mountain of the Unakas. Its summit, presenting a number of peaks more than 6,000 feet high, is in many places destitute of trees, owing to the low temperature of the heights. These are called "balds." On the Roan there is a succession of them, giving the broad summit at intervals a meadow-like aspect. Such places we have seen in the summer time alive with stock of all kinds, feeding and fattening upon the rich herbage. The "balds" are not confined to the Roan, but occur at many points along the summits of the main Unakas. As a rule, the ridges are clothed with forests. When, however, a height of about 5,000 feet above tide is reached, the deciduous trees—beeches, oaks and maples—become more or less dwarfed and often in ascending farther entirely disappear, the summit then becoming a "bald." Some of the highest points, instead of being bald, are dark with a heavy balsam and evergreen growth.

The rocks of the Unakas are micaceous and hornblendic gneisses, granites, slates, semi-metamorphic conglomerates, and sandstones, the strata of which are upturned and dip at high angles. The ridges are cold, steep and rocky, and, in the main, have thin, sandy soils. Nevertheless, on the tops of the highest ridges are tracts, like those of the "balds," prairie-like, black and rich. Places of considerable fertility are rarely met with on wooded slopes supporting a growth of walnut, beech, poplar, wild cherry, and the like, but at long intervals a cleared spot may be discerned. The mountains proper can hardly be said to be inhabited, and it is rare to meet with a true mountaineer. The chief settlements are below in the valleys and coves. Occasionally, cabins and small cultivated fields may be found along a stream in a depression of the high mountains. But we have already dwelt longer than necessary upon the characteristics of this division. As a section for the growing of cotton it has no interest. Of that reported as the product of certain counties partly pertaining to the division, perhaps not as much as a bale was raised upon the Unaka ridges proper. The mountains, so far as utilized, have been in the main grazing grounds for cattle.

REMARKS ON COTTON ACREAGE AND PRODUCTION IN TENNESSEE.

The cotton-producing areas of Tennessee lie substantially in the western half of the State. There are two chief regions of production, the one mostly within the great plateau slope of West Tennessee, and the other in the Central Basin. These regions are united by an area of low production lying within the limits of the highlands, in the western part of Middle Tennessee. The western chief region is the much more important of the two. Its area of greatest acreage in cotton, and the greatest occurring in Tennessee (15 per cent. and above), lies in the southwestern corner of the State. Passing from this outward, northerly to Kentucky, or easterly toward the highlands before referred to, areas of less and less acreage are successively crossed. The eastern chief region, that in the basin, has no one center of greatest acreage. The highest reached is 10 to 15 per cent., and this is found in detached belts or sections in different parts of the basin inclosed by areas of lower acreage. We add that as in going northward the cotton product diminishes the tobacco product, in general, takes its place and increases.

It is to be noted that the northern edge of the cotton-producing portion of Tennessee and of a small strip of western Kentucky between the Mississippi and Tennessee rivers, is, for the inland section east of the Mississippi river, the extreme northern limit of the cotton region of the South. (a)

The chief circumstance which determines this limit is the low temperature of the climate, or, as we may put it, the shortness of the growing season; that is to say, the season between frosts. This matter has already been discussed in this report. It has been shown that the isotherms, or lines of equal heat, of spring and fall for the non-mountainous parts extend diagonally through the State, or say, parallel to a line running from its southeastern to its northwestern corner. In accordance therewith, the limit of the cotton region, as seen in Tennessee and Kentucky, is approximately parallel to such a line, or would be, excepting that at one point the exception-

(a) We do not regard the penumbral regions of cotton culture in Tennessee and Kentucky. What we find there only proves that under unusually favorable circumstances, or in special cases, cotton may be cultivated out of its proper domain, within which only fair and constant mean results are attainable.

ally warm and mellow lands of the Central Basin prevail and carry the limit beyond the normal line. And further, in harmony with the direction of the isotherms, the extreme southwestern corner of the State is the warmest and has the longest growing season, and here we have the area of greatest production. Cultivators of cotton in all parts of the State, even in the warmest portion just referred to, fear the late frosts of spring and the first killing frosts of autumn, and are often driven from the rich but colder alluvial bottoms to the warmer, early-maturing uplands.

7—Ag.

TABLE III.—Population and Cotton Production in each Agricultural Region in the State.

Agricultural regions, arranged according to product per acre.	POPULATION.			COTTON PRODUCTION.											
	Land according to product per area.	Total.	White.	Colored.	Acres.	Bales.	Product per acre.				Total in tons.		Percentage of State's total production.	Cotton acreage per square mile.	Bales per square mile.
							Bale.	Seed-Cotton.	Lint.	Seed.	Lint.	Seed.			
	Sq. Mils.						Lbs.	Lbs	Lbs	Lbs					
The State.....	41,760	1,542,359	1,138,831	403,528	722,563	330,621	0.46	651	217	494	78,522	157,044	100.0	17.3	7.9
Lake county (Mississippi river alluvium).....	210	3,968	3,274	694	8,249	2,412	0.74	1,069	353	706	578	1,146	0.7	15.6	11.4
Mississippi river alluvial and bluff region.....	2,540	152,411	84,118	68,293	177,028	93,842	0.53	756	252	504	22,287	44,574	28.4	69.7	36.9
Brown loam table-lands*.....	6,200	261,997	162,278	99,719	896,269	171,534	0.44	621	207	414	40,739	81,478	51.9	62.3	27.7
Western valley Tenn' see river.....	2,910	68,609	53,935	9,674	24,033	9,620	0.40	570	190	380	2,285	4,570	2.9	8.3	3.3
Highland Rim.....	8,200	225,628	185,945	39,683	9,700	3,843	0.41	582	194	388	913	1,828	1.2	1.2	0.5
Central Basin.....	6,190	387,151	262,461	134,690	120,728	48,778	0.40	576	192	384	11,585	23,170	14.7	19.5	7.9
Cumberland table-lands†.....	2,970	29,151	27,996	1,215	133	55	0.41	588	196	392	13	28	0.2	0.1	.....
East Tennessee.....	12,630	413,214	363,854	49,360	1,421	537	0.35	562	184	368	127	264	0.2	0.1	.....

*Including summit region of water-shed.

†Cotton produced mostly on rim lands or valley lands of the table lands proper.

TABLE IV.—Banner Counties, as regards Total Production and Product per acre, in each Agricultural Region.

REGIONS ACCORDING TO PRODUCT PER ACRE.	COUNTY HAVING HIGHEST TOTAL PRODUCTION.					COUNTY HAVING HIGHEST PRODUCT PER ACRE.					
	NAME.	Rank in product per acre in State.	Acres.	Bales.	Product per acre.	NAME.	Rank in product per acre in State.	Acres.	Bales.	Product per acre.	Rank in product per acre in State.*
Lake county (Mississippi river alluvium)	Lake	1	3,249	2,412	0.74	Lake	23	3,249	2,412	0.74	1
Mississippi river alluvial and bluff region.....	Shelby.....	8	92,620	46,388	0.50	{ Dyer.....	16	14,637	8,564	0.59	2
						{ Obion.....	21	7,259	4,225	0.58	3
Brown-loam and table-lands †.....	Fayette.....	13	92,231	39,221	0.43	{ Crockett ...	14	17,807	9,320	0.52	6
	Van Buren..	.....	88	29	0.33	{ Gibson.....	5	38,820	19,272	0.52	7
Cumberland table-lands †.....	Hardin	23	12,859	5,345	0.42	Scott.....	69	8	2	0.67	.....
Western Valley of Tennessee river.....	Hickman....	22	3,128	1,302	0.42	Humphreys..	40	155	90	0.68	.....
Highland Rim.....	Giles	12	31,416	13,802	0.44	Montgomery	69	2	2	1.00	.....
Central Basin.....	Hamilton...	38	486	143	0.29	Trousdale....	75	1	1	1.00	.....
East Tennessee.....						Hawkins....	74	2	2	1.00	.....

* Omitting those whose production is less than 100 bales.

† Including summit region of water-shed.

‡ Cotton produced mostly on rim lands, or valley lands of the table-lands proper.

County in the State having highest [total] production, Shelby, 46,388 bales. County in the State having highest product per acre, Lake, 1,059 pounds of seed cotton. County in the State having highest cotton acreage per square mile, Fayette, 144 acres. County in the State having highest percentage of tilled land in cotton, Shelby, 47.3 per cent.

In the tables the aggregate number of bales produced in each natural division is approximately given. Many counties have portions in two contiguous divisions, which circumstance has caused more or less embarrassment in the attempt to classify the counties with reference to the divisions. For this reason the aggregates are approximations only. The defect, however, has been rectified to a considerable extent in the descriptions of the divisions given in the report. The map of relative acreage also will serve as a check in this direction.

The *Mississippi bottom region*, the smallest of our natural divisions, has the distinction of containing lands which produce the most cotton to the acre. This, however, is only an inference based on general information, as, throwing out Lake county, which is wholly within the bottom, the data were not at hand necessary for the separation of the products of the bottoms from those of the uplands. Lake county reports less than ten per cent. of its tilled land in cotton, which is much below the average of the river lands south of this county. The yield per acre in Lake was 0.74 of a bale of 475 pounds, the greatest yield recorded for any county.

The great *plateau-slope region of West Tennessee* stands pre-eminent within the State in cotton culture, its great expanse of level or gently undulating brown loams, together with the warmer climate, giving it this position. Its first subdivision on the west, the bluff region, had in 1879 a fraction less than thirty-three per cent. of its tilled lands in cotton. The yield per acre was 0.53 of a 475-pound bale, the highest rate attained, excepting that for the single county of Lake. The latter result is doubtless attributable in part to the character of the plateau areas of fine siliceous and limy loess soils of the subdivision. The Mississippi lands within these counties may help to exalt the rate, but they are too limited, comparatively, to affect it materially. The second subdivision, the brown-loam table-lands, the largest subdivision of the plateau slope, had also a fraction less than thirty-three per cent. of its tilled lands in cotton,

but its rate of yield per acre was less, being 0.45 of a 475-pound bale. In the third subdivision, the summit region of the watershed, there is a material falling off in the proportion of tilled land in cotton, it being 19.4 per cent. The yield per acre was 0.42 of the standard bale.

In the *western valley of the Tennessee river* the percentage of cotton production, as seen on the acreage map, is much reduced, especially in the northern part of the State. On the eastern side of the Tennessee, north of Duck river, it is, excepting a spot in Stewart county, practically nothing. Within the cotton-producing portion of this valley the percentage of tilled land in cotton was not quite seven per cent. The yield per acre was 0.40 of a bale.

Next follows the *western subdivision of the great Highland Rim*. This high "barreny" belt of country, with areas of lowest production alternating with areas of non-production, lies between the two chief regions of cotton culture, and almost makes a break in the continuity of the cotton-belt as a whole. What cotton is put to its credit was mostly raised in the deep valleys intersecting the belt.

The *Central Basin* as a cotton-producing area rates pretty well in the number of bales and in the percentage of the total acreage with that part of West Tennessee, nearly half, which embraces, with Benton, the two northern tiers of counties. Including as a part of the basin area the valley of Duck river, in Hickman, the West Tennessee fraction had the better of it by about 1,000 bales. In the basin, as a whole, the proportion of tilled lands in cotton was 6.4 per cent.; in a number of the northern counties, however, little or no cotton was planted, tobacco taking its place. If the non-cotton counties and parts of counties could be thrown out the proportion of tilled land in cotton would be much greater. For Giles county, as the case stands, it is eighteen per cent.; for Rutherford, sixteen; for Maury, ten; for Williamson, seven. The yield per acre for the cotton area proper of the basin is 0.40 of a 475-pound bale. Giles goes above this, the yield being 0.44 of a bale. Rutherford and Williamson fall to 0.38 of a bale. It is not clear, from a study of the column of "bales per acre" in Table I, that there is any relation between the figures there given for the counties of the basin and the capacities of the soils concerned, though in the case of Giles the rate would appear to be significant.

East of the basin the two mountainous divisions, the *Cumberland table-land* and the *Unaka Mountain region*, are non-producing as to cotton. The remainder of this part of the State, the *eastern subdivision of the Highland Rim* and the *valley of East Tennessee*, is in the penumbral region of cotton-growing. It would appear that the culture of cotton in the valley of East Tennessee had been advancing to some extent northward for a few years previous to 1880.

RELATIONS OF COTTON PRODUCTION TO THE RACES.

As to the relations of whites and negroes to cotton culture and production, Table I authorizes the broad statement that where the greatest aggregate of cotton is produced there is, other things being equal, the greatest negro population; and, further, that as the one decreases in the several belts the other does also, though not necessarily at the same rate. Take, for example, the group of six counties in West Tennessee (Shelby, Fayette, Hardeman, Tipton, Haywood and Madison), producing the most cotton and embracing the greatest acreage in cotton (15 per cent. and above), and we find that they contain nearly one-third (thirty per cent.) of the entire negro population of the State, although their aggregate area is a little less than one-twelfth (about eight per cent.) of the area of the State. And it makes little difference in this estimate if Shelby, with Memphis, be thrown out of the calculation. In this same group of counties the negro population is 57 per cent. of the total population. Similar calculations as to the production and population, especially in West Tennessee, will bear out, in general, both statements made. In the Central Basin the relations cannot be made so apparent, chiefly because the data are not at hand for making out the negro population of each separately. A real aberration, however, in the force of the statement is caused by the fact that some of the very rich counties, either in whole or in part, especially in the northern portion of the basin, find profitable employment for negro labor other than in the raising of cotton. Another circumstance to be considered, both as to West and to Middle Tennessee, is the presence of large and prosperous towns or cities in which negroes congregate, and which cannot always be eliminated in the calculations. We add that the negro population of the cotton region as a whole is approximately 68 per cent. of the entire negro population of the State, while its area is only about 48 per cent. of that of the State.

It must also be stated that while the greatest number of negroes are found in areas of greatest aggregate production, yet it does not follow that in such areas the most cotton is produced per acre. In the six counties referred to, in the southwestern corner of the State, we have, area for area, the most cotton produced and the highest percentage of negro population, with an average yield per acre of 0.46½ of a 475-pound bale, while in another group of counties in the northwestern corner of the State (Lake, Obion, Dyer, Lauderdale, Gibson and Crockett), where the relative production and percentages of negro population are much less, we have an average yield per acre of 0.58½ of the standard bale—a wide difference. This is in the case before us due much, but not altogether, to the differences in the qualities of the soils concerned. How far the kind of labor as to race enters as a factor in such results is a question for consideration.

METHODS OF COTTON CULTURE.

A few general notes are appended as to the agricultural methods employed in the cultivation of cotton within the State.

Fallowing is practiced in all the divisions, but only to a limited extent, and rarely in the alluvial region of the Mississippi. Land lying fallow within the area of the plateau slope of West Tennessee and of the western valley of the Tennessee river is sometimes tilled, sometimes only turned out. Weeds are often turned under and the land sown in field-pease, or in grain in place of pease, or sometimes in clover or grass. In the Central Basin the land is, in a majority of cases only turned out; sometimes sown in clover, grass, or wheat. The results in both cases are generally reported as good.

Rotation of crops is generally practiced, but with little system. Cotton, corn, and wheat, or corn, cotton, and wheat, are made to follow each other in courses of three to four and five years. In the place of wheat, oats or clover, or sometimes pease, sweet potatoes, or even in certain counties peanuts are substituted. On strong land the courses are sometimes reduced to two years, cotton and corn alternating, wheat or oats occasionally taking the place of the latter. It is the rule, perhaps, to change yearly, but there are many exceptions to this, the same crop, as cotton or corn, being raised on

the same land for a series of years, covering sometimes a period of five or even ten or more years. The general testimony is, as we might have anticipated, that rotation relieves the land and is of material benefit.

Fall plowing is done to a greater or less extent in all parts of the cotton region, more generally in the Mississippi bottom and the bluff region and in the Central Basin, and less so within the limits of the brown loam table-lands of West Tennessee. It is often done for wheat alone, and the results are very generally reported as good. Subsoil plowing amounts to but little in any of the divisions. When done, a bull-tongue is generally run in the furrow after a turning-plow.

Outside of a scanty supply of stable manure the fertilizers used amount to but little. Land plaster to a small extent and less guano are applied in the midland counties of West Tennessee. Some plaster is likewise used in the Central Basin, together with a limited amount of manufactured fertilizers. Cotton seed, especially away from cottonseed-oil mills, is thus in part disposed of. In addition, compost material, straw, cornstalks, ashes, etc., are utilized by provident cultivators. The lands are further often improved by the plowing under of clover, pease and weeds. The cotton lands of Tennessee are in the main still quite productive as compared with many sections in other States, and there does not exist the same necessity for the use of fertilizers; nevertheless there are areas with us which would be greatly benefitted by a judicious application of artificial or other fertilizers, and which, in truth, need them if good crops are to be expected.

Cotton-seed, in addition to its use as manure, is largely employed as a food for cattle, especially in regions remote from cottonseed-oil mills. When transportation to the mills is easy, much of it goes in that direction.

The most troublesome weed in all the cotton region is crab-grass. This is characterized as "most fatal," "great trouble," "pest," "worst enemy," etc. Cocklebur ranks second and careless-weed or smart-weed third as "pests" in all parts except the Central Basin, where careless-weed is second and cocklebur third. Other more prominent weeds are foxtail grass, rag-weed, purslane and hog-weed.

The farms or plantations in the cotton region, as a whole, vary from five to 2,000 acres, rarely 3,000. The largest are in the alluvial region of the Mississippi, the midland counties of West Tennessee, and the Central Basin. It is impossible to make out the average size of farms from the answers in the schedules with even an approximation to correctness, either for the whole area or any of its leading subdivisions.

Mixed farming is general throughout the entire region.

Supplies are everywhere chiefly raised at home. In West Tennessee some are imported from St. Louis, Memphis, Cincinnati, Louisville and Nashville, the point from which they are imported depending upon the facility of transportation. The tendency of raising supplies at home is evidently increasing.

Taking the whole cotton region into consideration, the chief laborers are negroes, and landlords often express a decided preference for them. There are no Chinese, and but few foreigners of any kind. In some parts of the region the proportion of white as compared with negro laborers is considerable. In the extreme northwestern counties the proportion is large, more than half, and in the summit region of the water-shed it is about half; but in the western valley of the Tennessee river and in the western subdivision of the highlands the whites predominate.

The wages paid will average throughout the area about \$10 per month, including board. In the extreme western part the rates appear to be higher, averaging \$12. In most cases the wages are due at the end of the year, though money and provisions may be advanced at any time. Many are hired by the month, and even by the day. Farms are often worked on shares. In such cases the landlords furnish for the most part all implements and the means necessary for the support of hands and for carrying on the farm work. In general, the system gives satisfaction, though occasionally objections are recorded against it.

The proportion of negroes owning houses or land is small, approximately five per cent. for the whole region. In the bluff and midland counties of West Tennessee and in the Central Basin the proportion is, according to reports, from four to five per cent. In the section lying between these, where the negro population is comparatively small (the Tennessee Ridge region, the western valley of the Tennessee, and the highlands), the proportion is greater, ranging

from eight to thirteen per cent. The reports vary much as to the condition of the negroes, the general inference to be drawn being that the frugal and industrious—and there are not a few of this class—are prosperous, improving, and in general, doing well, but that the improvident and indolent, of whom there are too many, are poor and uncomfortable, and likely to remain so. There is a general disposition to treat them fairly and kindly, though in rare cases doubtless they are imposed upon by selfish and designing men.

A remark further is added as to the increase in the total cotton product of 1879 over that of 1869, as shown by the census reports. Taking the whole State, and allowing for manifest errors in the report of 1870, and making the proper reductions, the total product of 1869 becomes 147,824 bales of 475 pounds each, and the total for 1879 is 330,621 bales, an increase of 124 per cent. over the product of 1869. The main increase was in West Tennessee. In the Central Basin it amounted to forty-seven per cent. In East Tennessee it was greater than elsewhere, though here but comparatively little cotton is raised.

Table of Analyses of Tennessee Soils and Subsoils.

Number	Name.	Locality.	County.	Vegetation.	Depth in inches.	Insoluble residue.	Soluble silica.	Total insoluble residue and silica.	Potash.	Soda.	Lime.	Magnesia.	Brown oxide of manganese.	Ferric oxide.	Alumina.	Phosphoric acid.	Sulphuric acid.	Volatile matter.	Total.	Hygroscopic moisture.	Temperature of absorption C.
1	Red clay soil.....	Florence sta.	Rutherford	Species of hickory, red, white and post oaks, elms, ash, honey-lo-cust, black walnut, wild cherry, sugar-tree, poplar, hackberry, red-bud, dogwood, and papaw. Originally covered with cane.	7	79.580	3.623	83.203	0.150	0.095	3.054	0.029	0.195	3.420	4.988	0.242	0.089	4.933	100.402	8.04	2.4
2	Red clay subsoil.....	do.	do.		7 to 15	66.092	11.687	77.789	0.508	0.088	0.119	0.204	0.272	6.837	10.299	0.305	0.079	3.728	100.228	8.84	17.2
3	Red clay soil.....	do.	do.		7	80.850	5.266	86.116	0.140	0.084	0.510	0.024	0.175	3.708	4.173	0.207	0.102	4.784	99.973	7.23	28.9
4	Red clay subsoil.....	do.	do.		7 to 15	81.670	6.080	87.750	0.211	0.033	0.161	0.301	0.157	3.613	6.220	0.056	0.008	1.966	100.476	6.59	17.2
7	Red clay soil.....	JW Burton's (3 mls. n. of M'freesboro	do.	About as above.	8 to 20	76.470	6.010	82.480	0.251	0.050	0.142	0.074	0.149	4.773	7.774	0.056	0.072	4.230	100.051	7.83	22.2
8	Red clay subsoil.....	do.	do.		8 to 20	76.470	6.010	82.480	0.251	0.050	0.142	0.074	0.149	4.773	7.774	0.056	0.072	4.230	100.051	7.83	22.2
9	Red clay soil.....	W.G. Harding (Belle Meade	Davidson	Oaks, elms, hickories, ash, linden, sugar-maple, hornbeam, walnut, cherry, dogwood, and red-bud. Originally in cane.	8 to 20	56.540	8.940	65.380	0.468	0.108	6.540	0.569	0.187	7.236	12.419	0.593	0.156	6.318	99.994	10.55	26.4
10	Red clay subsoil.....	do.	do.		8 to 20	47.950	11.010	58.960	0.752	0.174	8.382	0.615	0.091	9.584	17.305	0.355	0.188	3.591	99.996	11.01	26.4
6	Red clay subsoil.....	do.	do.		8 to 20	54.932	10.540	65.472	0.242	0.054	3.015	0.675	0.152	9.761	16.273	0.175	0.119	4.286	100.145	9.70	17.2
11	Poplar soil.....	Van Polk's.	Maury		11	79.270	5.472	84.742	0.319	0.059	0.515	0.342	0.040	3.683	5.264	0.849	0.192	4.549	100.064	8.63	29.1
12	Poplar subsoil.....	do.	do.	Poplar abundant; sweet-gum also frequent; walnut, oaks, ash, elm, hackberry, honey-locust, and dogwood. Originally covered with cane.	(11 to 23	73.840	8.531	82.371	0.327	0.080	0.547	0.368	0.068	5.265	7.120	0.843	0.107	3.872	99.407	11.45	29.1

13 Poplar soil.....	Hermitage ...	Davidson ..	} About the same as 11 and 12.....	10 78.860	6.900	85.760	0.238	0.047	0.878	0.368	0.093	2.637	6.066	0.255	0.065	4.468	100.415	10.08	28.2
14 Poplar subsoil.....	do.....	do.....		10 to 22 75.100	8.930	84.080	0.584	0.114	0.408	0.444	0.164	3.693	6.979	0.318	0.066	2.468	99.28 ⁸	10.00	28.2
15 Upland soil.....	Gill's station	Shelby	} Poplar, sweet-grum and hickories; { oaks, red-bud and dogwood. { Cane originally.	6 84.646	4.466	89.112	0.832	0.085	0.248	0.677	0.630	2.416	2.333	0.063	0.060	4.159	99.555	5.00	16.0
16 Upland subsoil.....	do.....	do.....		6 to 18 83.128	3.853	86.961	0.399	0.181	0.243	0.438	0.042	3.664	5.028	0.064	0.010	2.630	99.668	6.31	17.0
17 Loess soil.....	*Memp. Bluff	do.....	.....	73.113	3.390	76.508	0.433	0.180	3.967	3.291	0.094	4.687	3.102	0.319	0.060	1.780	99.927	4.67	

* The loess soil from the Memphis Bluff shows, in addition to analysis, 5.561 carbonic acid.

NOTE.—With the exception of Nos. 3, 4, 7, and 8, the soils and subsoils analyzed were each an average sample obtained by thoroughly mixing samples taken in the same lot from three excavations or holes dug for the purpose. Nos. 3 and 4 were obtained from a single hole, and are not averages. Nos. 7 and 8 are each an average of four samples from as many holes. In every case the lands supplying the samples have never been cultivated or entirely cleared. All are pasture grounds, with more or less of the native growth remaining.

The above table is compiled from analyses by the following persons: Nos. 1 and 3, by Durrett; No. 2, by McCanley; Nos. 4, 6, 7, 8, 9, 10, 11, 12, 13 and 14, by Corr; Nos. 15 and 17, by Colby.

TABULATED RESULTS OF THE ENUMERATION.

TABLE I.—AREA, POPULATION, TILLED LAND, AND COTTON PRODUCTION.

TABLE II.—ACREAGE AND PRODUCTION OF LEADING CROPS.

[From the Reports of the Census of 1880. Originally compiled by James M. Safford, from data supplied by the Census Office.]

TABLE I.—Area, Population, Tilled Land, and Cotton Production.

Counties.	Land area.	POPULATION.						Tilled Land.		COTTON PRODUCTION.						Cotton acreage per square mile.
		Total.	Male.	Female.	White.	Color'd	Average per square mile.	Acres.	Percent of Area.	Per cent. of tilled lands dev.	Acres.	Bales.	Average per Acre.			
													Bale.	Seed- Cotton.	Lint.	
The State	Sq. mile. 41,750	1,542,359	769,277	773,082	1,138,831	403,528	36.9	7,700,041	28.82	9.38	722,562	330,621	0.46	651	217	17.3
ALLUVIAL PLAIN OF THE MISSISSIPPI RIVER.																
Lake	210	3,968	2,145	1,823	3,274	694	18.9	34,666	25.79	9.37	3,249	2,412	0.74	1,059	353	15.5
ALLUVIAL PLAIN OF THE MISSISSIPPI RIVER AND PLATEAU SLOPE OF WEST TENNESSEE.																
a. Alluvial plain and bluff.																
Dyer	570	15,118	7,774	7,344	11,206	3,912	26.5	76,194	20.89	19.21	14,637	8,564	0.59	834	278	25.7
Laurens	410	14,918	7,627	7,291	9,081	5,857	36.4	58,010	22.11	41.52	24,083	13,250	0.55	783	261	58.7
Tipton	330	21,033	10,816	10,217	10,482	10,551	63.7	100,666	47.66	38.17	38,429	21,415	0.56	795	265	116.5
Shelby	690	78,430	38,856	39,574	34,508	43,922	113.7	195,726	44.32	47.32	92,620	46,388	0.50	714	238	134.2
Obion	540	22,912	11,875	11,037	18,841	4,071	42.4	109,857	31.79	6.61	7,259	4,225	0.58	828	276	13.4
Total.....	2,540	152,411	76,948	75,463	84,118	68,293	60.0	540,453	33.25	32.76	177,028	93,842	0.53	756	252	69.7
b. Brown-loom, table-lands, midland counties.																
Fayette	640	31,871	15,941	15,930	9,633	22,238	49.8	197,516	48.22	46.70	92,231	39,221	0.43	606	202	144.1
Hardeman	610	22,921	11,491	11,430	13,313	9,608	37.6	120,437	30.85	37.27	44,885	18,937	0.42	600	200	73.6
Haywood	570	26,053	12,914	13,139	8,497	17,556	45.7	137,155	37.60	36.40	49,919	23,092	0.46	660	220	87.6
Madison	590	30,874	15,355	15,519	15,406	15,468	53.2	125,693	33.86	36.46	45,825	19,237	0.42	600	200	79.0
Crockett	260	14,109	7,081	7,028	10,493	3,616	54.3	65,428	39.32	27.22	17,807	9,320	0.52	747	249	68.5
Gibson	550	32,685	16,671	16,014	23,540	9,145	59.4	146,163	41.52	25.19	36,820	19,272	0.52	747	249	66.9
Weakley	620	24,598	12,454	12,084	20,125	4,413	39.6	129,075	32.53	11.94	15,406	7,576	0.49	702	234	24.8
Total.....	3,830	183,051	91,907	91,144	101,007	82,044	47.8	921,467	37.59	32.87	302,893	136,675	0.45	642	214	79.1

c. Summit region of water-shed.													
Henry.....	22,142	11,018	15,488	6,654	40.3	133,302	37.90	9.89	13,186	5,516	0.42	597	199
Carroll.....	22,103	11,059	16,524	5,579	40.2	120,231	34.16	20.55	24,711	10,505	0.43	606	202
Henderson.....	17,430	8,671	14,514	5,579	39.1	93,241	25.12	23.96	22,344	9,419	0.42	600	200
McNairy.....	17,271	8,665	14,545	2,426	25.0	78,800	17.94	29.36	23,135	9,419	0.41	579	193
Total.....	78,946	39,308	61,271	17,675	33.3	425,064	28.06	19.59	83,376	34,859	0.42	597	199
WESTERN VALLEY OF TENNESSEE INVER.													
Benton.....	9,780	4,880	9,147	633	25.7	46,425	19.09	10.60	4,923	1,801	0.37	522	174
Decatur.....	8,498	4,171	7,276	1,222	27.4	37,861	19.08	14.77	5,591	2,169	0.39	562	184
Hardin.....	14,793	7,334	12,775	2,018	24.3	72,446	18.56	17.55	12,859	5,343	0.42	591	197
Perry.....	7,174	3,630	6,609	1,565	17.9	35,422	13.84	1.28	452	196	0.43	618	206
Humphreys.....	4,500	5,633	9,708	1,671	25.3	53,932	18.73	1.28	135	90	0.58	828	276
Houston.....	260	2,181	3,487	808	16.5	21,253	12.77	0.40	4	4	0.50	711	237
Stewart.....	12,690	6,552	9,933	2,757	25.4	53,934	15.55	0.06	45	15	0.33	474	158
Total.....	68,609	34,494	58,935	9,674	23.6	321,279	17.25	7.48	24,033	9,620	0.40	570	190
THE HIGHLANDS, OR HIGHLAND RIM OF MIDDLE TENNESSEE.													
a. Western subdivision.													
Montgomery.....	28,481	14,103	14,378	13,695	52.7	135,658	39.25	.....	2	2	1.00	1,425	475
Robertson.....	18,861	9,565	13,242	5,619	37.7	157,644	49.26	.....	5	3	.....	.....	.....
Cheatham.....	7,356	4,073	3,883	6,295	19.8	42,395	17.90	0.01	31	13	0.42	570	190
Dickson.....	12,460	6,365	10,229	2,231	19.8	59,651	14.79	0.05	31	13	0.42	567	189
Hickman.....	12,095	6,047	9,849	2,246	19.8	71,970	18.43	4.35	3,128	1,302	0.42	594	198
Lewis.....	360	1,082	1,049	2,181	6.1	11,654	5.06	1.96	3,259	1,02	0.45	638	212
Wayne.....	11,301	5,543	5,758	1,069	15.9	56,456	12.42	5.78	3,255	1,207	0.37	528	176
Lawrence.....	590	1,188	9,599	784	17.6	47,855	12.67	3.82	1,830	702	0.38	546	182
Total.....	103,718	51,966	76,195	27,523	24.1	583,293	21.15	1.46	8,490	3,330	0.39	558	186
b. Eastern subdivision.													
Macon.....	9,321	4,687	8,429	892	33.3	53,438	29.82	0.01	4	1	0.25	357	119
Clay.....	6,987	3,508	3,479	399	26.9	41,880	25.17	.....	2	1	0.50	711	237
Overton.....	12,153	5,980	6,128	342	25.5	73,022	21.13	0.13	95	41	0.43	615	207
Jackson.....	12,003	5,980	6,028	433	42.9	56,182	31.82	0.10	56	28	0.50	711	237
Putnam.....	11,601	5,744	5,757	598	25.0	60,817	20.66	0.02	14	4	0.29	408	136
Dekalb.....	14,813	7,438	7,375	1,153	49.4	67,885	35.36	0.01	26	12	0.46	637	219
White.....	11,076	5,520	5,656	1,003	25.4	67,349	24.63	0.49	338	139	0.41	585	195
Warren.....	14,079	6,915	7,164	1,801	32.0	85,834	30.50	0.24	206	96	0.47	663	221
Colfax.....	12,894	6,357	6,587	2,278	43.0	71,051	37.01	0.45	55	20	0.36	519	173
Franklin.....	17,178	8,527	13,646	3,532	29.1	92,753	24.56	0.08	414	171	0.41	588	196
Total.....	122,110	60,660	109,750	12,360	31.4	672,212	27.00	0.18	1,210	513	0.42	603	201

TABLE I.—Area, Population, Tilled Land, and Cotton Production.—Continued.

Counties.	Land area.	POPULATION.						Tilled Land.		COTTON PRODUCTION.					Cotton acreage per square mile.
		Total.	Male.	Female.	White.	Color'd	Average per square mile.	Acres.	Percent of Area.	Per cent. of tilled lands dev to cotton.	Acres.	Bales.	Average per Acre.		
													Bale.	Seed- Lint.	
CENTRAL BASIN.															
Giles	590	36,014	18,030	17,975	21,824	14,190	61.0	170,599	45.18	18.42	31,416	13,802	0.44	627	219
Lincoln	540	26,960	13,462	13,498	20,643	6,317	49.9	146,326	42.34	6.06	8,868	3,486	0.39	561	187
Moore	270	6,233	3,169	3,061	5,448	785	23.1	38,337	22.53	0.05	20	7	0.35	498	166
Bedford	520	26,025	12,934	13,091	18,536	7,489	50.0	164,800	49.52	1.36	2,239	940	0.42	597	199
Marshall	350	19,259	9,652	9,607	14,429	4,830	55.0	117,005	52.23	4.01	4,697	1,721	0.37	522	174
Maury	590	39,904	19,690	20,214	21,731	18,173	67.6	216,066	57.22	10.07	21,748	8,912	0.41	585	195
Williamson	540	28,313	14,065	14,248	15,922	12,371	52.4	158,970	46.00	7.46	11,859	4,538	0.38	546	182
Rutherford	590	36,741	18,136	18,605	20,248	16,493	62.3	200,049	52.98	16.32	31,657	12,414	0.38	543	181
Cannon	220	11,859	5,905	5,954	10,696	1,163	53.9	64,965	46.14	0.12	77	35	0.45	648	216
Davidson	500	79,026	38,923	40,103	47,678	31,348	158.1	139,166	43.49	2.31	3,224	1,333	0.41	588	196
Wilson	410	28,747	14,221	14,526	20,292	8,455	70.1	170,279	61.77	1.87	3,191	1,272	0.40	567	189
Smith	390	17,799	8,971	8,828	14,215	3,584	49.4	100,855	43.77	0.52	732	317	0.43	618	206
Sumner	530	23,625	11,751	11,874	16,294	7,331	44.6	139,980	41.27	0.52	732	317	0.43	618	206
Trousdale	180	6,646	3,334	3,312	4,505	2,141	36.9	95,817	31.09	0.52	732	317	0.43	618	206
Total	6,190	387,151	192,252	194,899	252,461	134,690	62.5	1,863,764	47.05	6.48	120,729	48,778	0.40	576	192
CUMBERLAND TABLE-															
LAND.															
Fentress	500	5,941	3,017	2,924	5,838	103	11.9	35,967	11.24	0.02	6	2	0.33	474	158
Scott	640	6,021	3,081	2,940	5,864	157	9.4	28,946	7.07	0.01	3	2	0.67	951	317
Morgan	400	5,156	2,722	2,434	4,867	289	12.9	19,845	7.75	0.02	4	1	0.25	357	119
Cumberland	690	4,538	2,291	2,247	4,496	42	6.6	15,198	3.44	.....	.....	.....	.....	.....	.....
VanBuren	340	2,933	1,481	1,452	2,747	186	8.6	17,976	8.26	0.49	88	29	0.33	471	157
Grundy	400	4,592	2,518	2,074	4,154	438	11.5	14,839	5.80	0.22	32	21	0.66	936	312
Total	2,976	29,181	15,110	14,671	27,966	1,215	9.8	132,771	6.99	0.10	133	55	0.41	586	196

UNDERLAND TABLE.
LAND, VALLEY OF EAST
TENNESSEE, AND UNAKA
MOUNTAIN REGION.

*a. Table-land and
valley.*

Marion.....	500	10,910	5,485	9,541	1,369	21.8	47,649	14.98	0.19	89	35	0.39	561	187	0.2
Sewanee.....	220	2,667	1,295	2,509	56	11.7	17,087	12.14	.....	.....	.....	.....	.....	.....	.....
Bledsoe.....	280	5,617	2,848	4,838	779	11.7	40,915	22.83	.....	.....	.....	.....	.....	.....	.....
Hamilton.....	370	28,642	12,025	16,239	7,403	63.9	62,020	21.97	0.93	486	143	0.29	420	140	1.3
Rhea.....	340	3,559	8,514	6,300	773	20.8	40,956	18.82	0.02	9	4	0.44	633	211	.....
Anderson.....	440	10,920	5,441	9,917	903	24.6	58,623	20.82	0.10	60	38	0.63	903	301	0.1
Campbell.....	400	10,000	4,989	5,016	434	25.0	53,730	20.99	0.01	4	1	0.25	357	119	.....
Claiborne.....	340	13,373	6,684	12,584	789	39.3	64,420	29.60	0.02	13	6	0.38	549	183	.....
Total.....	2,890	84,005	42,327	71,459	12,506	29.1	375,400	20.30	0.18	661	226	0.34	486	163	0.2

b. Valley.

James.....	200	5,187	2,590	4,478	709	25.9	32,505	25.89	.....	.....	.....	.....	.....	.....	.....
Bradley.....	340	12,124	5,894	10,258	1,866	35.7	71,296	32.76	0.07	51	15	0.29	420	140	0.3
McMinn.....	480	16,064	7,261	12,713	2,346	31.4	104,174	33.91	0.08	80	22	0.27	993	131	0.3
Meigs.....	300	7,117	3,584	6,303	814	23.7	49,124	25.59	0.07	36	14	0.39	555	186	0.1
Loudon.....	230	9,148	4,564	7,362	1,766	39.8	68,523	46.55	0.01	8	4	0.60	711	237	0.1
Roane.....	450	16,237	7,649	13,310	1,977	33.9	72,596	25.21	0.05	35	18	0.51	732	244	0.1
Knox.....	500	39,124	19,099	31,880	7,244	78.2	154,188	48.18	0.01	11	7	0.64	906	302	.....
Jefferson.....	320	15,846	7,781	8,065	2,507	49.5	89,764	43.83	.....	.....	.....	.....	.....	.....	.....
Union.....	320	10,260	5,087	10,042	218	46.6	54,311	38.57	0.08	59	96	0.61	870	290	.....
Grant.....	220	12,894	6,043	11,555	829	38.7	76,399	37.30	0.03	12	2	0.17	237	79	0.1
Hamblen.....	150	10,187	4,990	8,481	1,706	67.9	45,812	47.78	.....	.....	.....	.....	.....	.....	.....
Hancock.....	340	9,098	4,466	8,616	492	26.8	46,847	21.53	.....	.....	.....	.....	.....	.....	.....
Lawrence.....	570	20,610	10,066	17,966	2,654	36.2	124,235	34.07	.....	2	2	1.00	1,425	475	.....
Washington.....	350	16,181	7,921	14,604	1,577	46.2	109,500	48.98	.....	.....	.....	.....	.....	.....	.....
Sullivan.....	400	18,321	9,015	17,011	1,310	45.8	112,527	43.95	.....	.....	.....	.....	.....	.....	.....
Total.....	5,170	215,898	106,000	187,933	27,955	41.7	1,211,911	36.63	0.02	206	121	0.40	582	194	0.1

c. Valley and Unaka.

Polk.....	400	7,269	3,525	6,893	376	18.2	36,316	14.19	0.32	116	36	0.31	441	147	0.3
Monroe.....	500	14,283	7,080	12,991	1,292	28.6	94,211	29.44	0.14	139	72	0.56	795	265	0.3
Blount.....	770	15,985	8,039	14,273	1,712	20.8	92,860	18.84	0.21	198	70	0.35	504	168	0.3
Sevier.....	520	15,541	7,707	14,816	1,693	27.9	79,463	23.81	0.01	10	6	0.60	855	285	.....
Cooke.....	540	14,808	7,278	13,361	1,447	29.4	70,189	20.31	0.01	8	5	0.62	891	297	.....
Greene.....	430	24,005	11,808	21,850	2,155	45.3	148,665	43.83	.....	3	1	0.33	474	158	.....
Unicoi.....	480	8,645	1,819	3,526	119	7.6	16,269	5.30	.....	.....	.....	.....	.....	.....	.....
Carters.....	340	10,019	5,013	9,385	634	29.5	42,970	19.75	.....	.....	.....	.....	.....	.....	.....
Johnson.....	390	7,766	3,884	7,295	471	19.9	36,218	14.51	.....	.....	.....	.....	.....	.....	.....
Total.....	4,470	113,321	56,160	104,422	8,899	25.4	617,161	21.57	0.08	464	190	0.41	586	195	0.1

TABLE II.—*Acreage and Production of the Leading Crops.*

COUNTIES.	COTTON.		INDIAN CORN.		OATS.		WHEAT.	
	Acres.	Bales.	Acres.	Bushels.	Acres.	Bushels.	Acres.	Bushels.
The State	722,562	330,621	2,304,873	62,764,429	468,566	4,722,190	1,196,563	7,331,353
Alluvial Plain of the Mississippi River.								
Make	3,249	2,412	14,730	536,265	108	4,266	1,608	24,293
Alluvial Plain of the Mississippi River and Plateau Slope of West Tennessee.								
a. Alluvial plain and bluff.								
Dyer	14,637	8,564	27,820	900,776	1,961	97,871	11,820	101,623
Laurens	24,083	13,250	32,560	580,797	3,376	37,398	3,889	24,963
Tipton	38,429	21,413	32,379	762,751	2,431	54,096	7,963	66,137
Shelby	92,020	46,388	55,260	986,210	3,216	72,674	3,664	23,437
Obion	7,259	4,225	45,005	1,501,861	2,105	35,098	25,368	230,243
Total	177,028	93,812	183,044	4,742,345	13,086	196,637	52,004	436,293
b. Brown-loam table-lands, midland counties.								
Fayette	92,221	39,221	63,419	1,080,505	3,661	38,129	3,787	18,004
Hardeman	44,855	18,027	45,207	767,324	2,654	20,307	4,758	23,991
Haywood	49,919	23,092	39,678	750,234	3,976	29,207	5,326	29,278
Madison	15,625	10,257	46,885	806,253	3,577	31,421	9,623	60,916
Crockett	17,807	10,420	25,660	436,762	1,501	16,171	9,893	64,431
Gibson	36,520	19,272	67,633	1,469,633	1,978	44,282	26,016	162,477
Weakley	19,406	7,576	90,001	1,307,873	1,795	22,583	26,479	171,885
Total	302,393	136,675	328,876	6,819,301	19,022	202,813	84,822	510,934
c. Summit region of water-shed.								
Henry	13,186	5,516	51,852	1,198,660	3,171	35,407	20,853	124,537
Carroll	24,711	10,508	37,076	1,018,415	3,413	37,461	17,354	88,396
Henderson	22,934	9,419	37,734	982,249	4,543	42,376	9,791	46,941
McNairy	23,135	9,419	38,501	678,669	5,068	47,569	6,726	30,678
Total	83,976	34,869	169,163	3,687,383	16,220	162,836	54,724	290,659

Western Valley of Tennessee River.

Benton.....	4,983	1,801	94,788	569,854	2,468	96,882	4,600	19,785
Decatur.....	4,691	2,199	19,986	473,924	2,701	96,890	8,299	14,911
Hardin.....	12,869	5,945	30,986	719,779	2,481	85,620	29,248	29,248
Perry.....	129	186	10,007	439,161	1,496	20,874	3,113	16,051
Humphreys.....	163	90	28,371	836,941	1,668	2,527	9,495	25,371
Houston.....	8	4	8,874	931,811	1,841	13,846	0,062	9,062
Stewart.....	46	15	28,867	778,494	2,070	26,629	1,620	94,855
Total.....	24,083	9,620	155,007	4,094,134	14,816	171,721	29,867	149,283
The Highlands, or Highland Rim of Middle Tennessee.								
a. Western subdivision.								
Montgomery.....	2	2	49,882	1,236,561	7,263	96,096	17,122	149,534
Robertson.....	5	2	45,408	1,798,702	9,873	115,678	21,912	134,426
Cheatham.....	2	2	19,719	457,189	3,309	43,297	3,868	18,036
Dickson.....	81	13	28,351	616,423	4,300	50,735	8,618	45,318
Hickman.....	3,138	1,302	828,117	828,117	2,886	43,486	7,874	37,491
Lewis.....	2,269	1,092	30,716	114,010	3,889	4,808	1,874	4,824
Wayne.....	8,265	1,207	5,772	583,305	2,100	27,432	8,791	40,038
Lawrence.....	1,880	702	21,673	434,215	2,612	30,037	8,053	45,331
Total.....	8,490	3,830	224,645	5,063,521	32,801	399,571	76,777	471,998
b. Eastern subdivision.								
Macon.....	4	1	21,286	436,894	3,876	34,531	6,461	31,495
Clay.....	2	1	20,010	412,287	1,955	15,205	4,790	24,424
Overton.....	95	41	30,338	550,091	4,193	32,953	9,609	40,015
Jackson.....	54	26	27,443	683,019	2,586	28,714	6,825	40,294
Putnam.....	14	2	26,610	511,610	2,919	24,160	8,726	42,083
DeKalb.....	28	12	31,094	863,207	2,275	21,202	13,416	76,803
White.....	338	136	34,699	637,145	2,775	24,811	11,354	44,653
Warren.....	208	96	38,456	670,846	5,612	51,613	15,888	66,183
Coffee.....	65	20	27,962	658,238	3,127	34,160	9,574	58,156
Franklin.....	414	171	41,560	745,233	5,859	71,960	20,178	135,816
Total.....	1,210	513	296,11	6,168,595	35,289	339,379	106,821	553,851
Central Basin.								
Giles.....	31,416	13,802	67,753	1,545,665	2,592	33,289	39,795	190,205
Lincoln.....	8,863	3,406	67,480	1,263,915	2,993	37,309	37,279	276,453
Moore.....	80	7	14,389	337,956	1,050	14,739	8,666	66,866
Bedford.....	2,239	940	68,492	1,632,358	6,270	37,408	39,589	967,426
Marshall.....	4,697	1,731	47,927	1,176,536	4,675	59,567	30,434	174,536
Maury.....	21,749	8,913	85,456	2,177,071	6,068	91,453	43,510	271,591

TABLE II.—Acreage and Production of the Leading Crops—Continued.

COUNTIES.	COTTON.		INDIAN CORN.		OATS.		WHEAT.	
	Acres.	Bales.	Acres.	Bushels.	Acres.	Bushels.	Acres.	Bushels.
Central Basin—continued.								
Williamson.....	11,859	4,538	61,122	1,439,445	5,912	85,522	39,685	315,896
Rutherford.....	32,667	12,414	75,753	1,590,555	6,432	124,794	29,250	172,997
Cannon.....	3,224	1,333	27,812	821,012	1,952	28,802	12,991	94,150
Davidson.....	3,191	1,272	52,764	1,439,532	8,141	133,507	13,681	151,550
Wilson.....	.....	.....	68,468	1,806,232	9,978	132,507	32,953	183,640
Smith.....	732	317	37,166	1,071,950	3,724	47,240	17,645	104,845
Sumner.....	1	1	49,245	917,940	9,138	81,051	20,445	140,835
Trousdale.....	.....	.....	15,873	390,394	2,297	26,197	6,629	37,284
Total.....	120,729	48,778	729,225	17,641,971	71,322	941,713	368,585	2,446,432
Oumberland Table-land.								
Pentress.....	6	2	14,591	210,416	2,432	15,524	2,705	11,092
Scott.....	3	1	12,586	185,646	3,606	23,040	447	2,297
Morgan.....	4	.....	7,889	116,327	2,660	19,490	696	3,532
Cumberland.....	.....	.....	8,452	127,636	1,866	18,006	2,797	13,077
Van Buren.....	88	29	7,771	139,070	764	6,006	2,284	12,077
Grundy.....	32	21	6,364	114,758	869	8,507	1,783	7,865
Total.....	133	55	57,663	892,853	11,767	83,415	9,042	39,880
Oumberland Table-land, Valley of East Tennessee, and Unaka Mountain Region.								
a. Table-land and valley.								
Marion.....	89	35	21,985	474,115	4,240	54,582	2,834	13,275
Sequatchie.....	.....	.....	16,267	145,532	4,337	4,337	1,093	6,713
Bledsoe.....	.....	.....	17,474	342,240	2,749	27,292	3,546	19,108
Hamilton.....	486	143	23,357	361,070	4,375	43,375	5,618	45,925
Rhea.....	.....	.....	16,453	362,631	3,843	38,659	7,764	31,290
Anderson.....	60	36	21,047	18,290	8,006	86,006	7,943	44,603
Campbell.....	4	.....	24,138	341,155	1,700	69,138	4,513	28,549
Claiborne.....	13	6	22,475	496,262	9,136	74,921	9,123	44,192
Total.....	661	224	169,176	2,993,923	43,732	396,138	40,319	284,681

Cumberland Table-land, Valley of East Tennessee, and Unaka
Mountain Region—continued.

b. Valley.

James.....	14,413	223,701	2,816	15,148	6,638	24,650
Bradley.....	23,734	337,446	4,633	26,372	16,698	88,900
McMinn.....	35,313	440,838	6,863	78,372	20,198	119,870
Meigs.....	21,812	444,103	5,367	45,174	8,141	147,707
London.....	22,512	316,235	10,037	91,293	14,490	90,552
Roane.....	33,241	692,751	13,305	130,824	10,416	64,276
Knox.....	44,139	752,559	23,068	228,784	34,417	227,705
Jefferson.....	29,817	506,622	9,448	88,083	21,261	126,649
Union.....	19,844	319,702	7,524	62,238	8,015	39,218
Orange.....	25,832	384,126	10,524	83,070	12,826	61,553
Hancock.....	16,143	232,184	6,731	51,270	11,065	66,037
Hawkins.....	17,132	292,194	5,673	41,632	6,162	39,189
Washington.....	35,791	708,690	12,688	117,578	20,413	116,636
Sullivan.....	20,154	407,633	11,394	106,579	23,740	153,204
.....	25,477	550,374	13,473	111,662	21,830	131,319
Total.....	384,924	6,626,484	146,514	1,275,281	236,037	1,388,849

c. Valley and Unaka.

Polk.....	116	16,009	1,827	10,505	7,133	37,126
Monroe.....	129	33,928	10,116	80,793	19,773	114,884
Benton.....	198	31,680	12,883	95,387	20,588	110,196
Coyler.....	10	27,761	5,923	63,274	17,450	80,499
Cooke.....	8	28,368	492,885	5,767	16,660	94,793
Greene.....	3	39,446	719,465	139,134	39,549	237,302
Carroll.....	.....	5,049	16,597	22,501	1,840	9,365
Calder.....	.....	12,403	81,852	23,501	8,226	55,150
Johnson.....	.....	7,555	147,389	39,496	4,488	31,022
Total.....	464	202,217	63,837	542,376	135,417	779,307

REPORT
—OF—
C. L. JUNGHERMAN,
ASSISTANT GEOLOGIST OF THE BUREAU OF AGRICULTURE, STATIS-
TICS AND MINES,
—AND—
ACTING INSPECTOR OF MINES
—TO—
A. J. McWHIRTER, Commissioner,
ON THE
Condition of Mines in Tennessee.

REPORT.

NASHVILLE, Nov. 29, 1884.

To Hon. A. J. McWHIRTER, Commissioner of Agriculture, Statistics, Mines, and Immigration :

Pursuant to an Act of the Legislature of Tennessee, passed April 7, 1881, entitled, " An Act to provide for the ventilation of coal mines and collieries, and the protection of human life therein, of the State of Tennessee," section 1, which authorizes the Assistant Geologist of Tennessee to perform the duties of the office of Inspector of Mines when no such person is otherwise provided for, I beg leave to submit the following report. The absence of any instruments for measuring the velocity of the air, pressure, etc., and the manifest inadaptability of the present law to the requirements of the systems of mining in vogue in this State, together with the fact that many of the mine owners and operators here never saw or heard of the law on this subject, render it a difficult one to properly present in full.

For convenience, the mines on the different railroads were visited in succession, without any regard to the similarity or dissimilarity of the coal fields worked.

STANDARD COAL AND COKE COMPANY,

Newcomb, Campbell county, Tenn., on the East Tennessee, Virginia, and Georgia Railroad (K. and O. Division), about two miles from the main line of railroad, on a branch road of their own. The officers are: E. E. McCroskey, President and Treasurer, Knoxville, Tenn.; J. F. McClure, Vice-President and General Manager, Newcomb, Tenn.; W. W. Woodruff, Secretary, Knoxville, Tenn.

This mine only commenced the shipment of coal Jan. 17, 1884, and had made but little headway until October last, owing to poor railroad facilities on a new road.

The following is a tabulated statement showing the output:

January.....	951 tons.
February.....	2,896 tons.
March.....	2,882 tons.
April.....	4,306 tons.
May.....	4,704 tons.
June.....	4,710 tons.
July.....	3,599 tons.
August.....	3,362 tons.
September.....	5,327 tons.
October.....	6,502 tons.
Total.....	39,239 tons.

This coal is shipped to Middle and East Tennessee, Western North Carolina, Georgia, North Alabama, and Virginia. They employ about 150 hands and pay 75c. per ton for mining all over 1½ inch screen.

These mines are drifted into the mountain on a horizontal or gently rising surface. The seam is four feet, block coal—one of the best domestic coals in the East Tennessee markets. There are several outlets and an air shaft 72 feet high.

Both ventilation and drainage are good.

JELICO MOUNTAIN COAL, COKE AND TRANSPORTATION COMPANY, Newcomb, Campbell county, Tenn., on the East Tennessee, Virginia and Gorgia Railroad (K. and O. Division).

Colonel Samnel L. Wooldridge, Lexington, Ky., President; Charles F. Johnson, Louisville, Ky., Vice-President; Thomas Mitchell, Lexington, Ky., Treasurer; Edgar C. Maxham, Superintendent and General Manager, Newcomb, Tenn.

The output of coal from August, 1884, to November 1, 1884, is 74,794 tons.

They supply the markets of East Tennessee, North Carolina, Virginia, Georgia, Mississippi, Florida, and Alabama.

The miners are paid 50 cents per ton for run of mines, and average 175 men.

This coal is of the same general character as the coal of the Standard Coal and Coke Company. An air shaft 95 feet high and a proper system of air doors ensures good ventilation. The mines are dry and self-draining, and under intelligent supervision.

KNOXVILLE IRON COMPANY,

Lessees of the Coal Creek Mining and Manufacturing Company's mines, Coal Creek, Anderson county, Tennessee, about one and a half miles from the main track of the K. and O. Division of the East Tennessee, Virginia and Georgia Railroad.

This mine has but one outlet, and an air-shaft about 50 feet high, is not very well drained, and the ventilation is but fair; are now driving another entry for drainage and ventilation. Work about 160 convicts and 30 free laborers in the mines. Have their magazine within the mine, between the main entry and the return air course, and also store their oils here. Have been requested to remove the magazine to the outside, and have promised to do so. The free laborers are paid $67\frac{1}{2}$ cents per ton for coal, run of mines. Output from January 1, 1883 to November 1, 1884, 204,978 tons. Sell their product to East and Middle Tennessee, North Alabama, Georgia, North and South Carolina. W. R. Tuttle, President, Knoxville, Tenn.; W. S. Mead, Secretary, Knoxville, Tenn.

The coal is a good gas and steam coal, the strata being about 4 feet thick: is softer than the coals found at Newcomb.

COAL CREEK MINING COMPANY,

Coal Creek, Anderson county, Tennessee, owners of the Black Diamond, Central, Empire, Black Eagle and Franklin Mines. The property is leased from the Coal Creek Mining and Manufacturing Company, and they pay 1c per bushel royalty. The aggregate amount of coal shipped from their different mines from January 1, 1883, to November 1, 1884, was 150,000 tons. On an average, they pay their miners $62\frac{1}{2}$ c per ton for mining. The Company owns some coke ovens, which are not in operation. They sell their Black Diamond coal as far west as Memphis, Tennessee, as far south as Jacksonville, Florida, and supply the following markets: Tennessee, Alabama, Georgia, Florida, Virginia, North Carolina and South Carolina. The officers of this company are—T. H. Heald, President, Knoxville, Tenn.; E. C. Locke, Secretary and Treasurer, Knoxville, Tenn.

Black Diamond Mine.—Natural ventilation good. This mine being in a spur of the mountain is opened on several sides, having five different outlets.

Black Eagle Mine.—This is a comparatively new mine; has an

air shaft 60 feet high, furnace, and a 4x4 up-cast stack, 4 outlets, and are driving an entry, which will soon connect with the Empire mines; ventilation good.

The other mines, viz.: Central, Empire and Franklin are not being worked at present. (Drift.)

ANDERSON COUNTY COAL COMPANY.

This mine is about 2 miles from the Knoxville & Ohio Division of the East Tennessee, Virginia & Georgia Railroad, on a branch railroad; has three different outlets or means of egress from the mine; an air shaft 44 feet high; ventilation good. (Drift.)

Output from January 1, 1883, to November 1, 1884, was 28,780 tons of coal.

H. B. & JOEL BOWLING MINE,

Coal Creek, Anderson county, Tennessee, 3 miles from the Knoxville & Ohio Division of the East Tennessee, Virginia & Georgia Railroad. H. B. & Joel Bowling are managers and lessees of the mine. They supply East Tennessee only, and employ about 20 men, whom they pay 75c per ton for mining clean coal, and 62½c for run of the mines; has 2 outlets; natural ventilation good.

COAL CREEK AND NEW RIVER COAL COMPANY,

Three and one-half miles from the Knoxville & Ohio Division of the East Tennessee, Virginia & Georgia Railroad, Coal Creek, Tennessee. This company is putting up machinery to operate five compressed-air drills. The mine is generally well drained. The return air is through an old entry, disused, and much fallen in. Have requested them to have this improved. The air shaft is 30 feet high and 10 square feet surface; ventilation fair.

DAISY COAL MINING COMPANY,

Daisy, Hamilton county, Tenn., on the Cincinnati Southern Railroad, 18 miles north of Chattanooga. The officers are: James G. Aydelott, President, Tullahoma, Tenn.; C. W. Davidson, Secretary, Tullahoma, Tenn.; Thos. Parks, Vice-President, Daisy, Tenn.; W. H. McLemore, Treasurer, Daisy, Tenn. This mine, although in the Walden's Ridge formation, still has very little dip, and has about 3½ feet average coal. There are two outlets, and an air shaft

40 feet high. The furnace is in bad condition, and the return air course too small. These are both being remedied. Air good, as they are working but few men in the mines now. They ship through East Tennessee and Georgia, and have an output of 30,000 tons per year; work from 60 to 100 hands in and around the mines, and pay 55c to 65c per ton for mining.

THE SODDY COAL COMPANY.

Postoffice—Soddy, Hamilton county, Tennessee.

These mines are located about one mile from Rathburn station, on the Cincinnati Southern Railroad, twenty-one miles north of Chattanooga.

This seam of coal is in Walden's Ridge, is about three feet thick, and is worked so that the natural dip of the coal drains and ventilates the mines. They have three outlets and an air shaft 109 feet above the upper intake and 160 feet above the lower intake. The ventilation is very good. The slack is used for coking and the lump sold for steam and domestic purposes. A narrow-gauge road three miles in length, from the mines to the Tennessee river, furnishes them one means of transportation, while the Cincinnati Southern Railroad furnishes another. They have 150 coke ovens.

Their output from January 1, 1883, to November 1, 1884, was 96,000 tons, or 2,400,000 bushels of coal, of which 32,000 tons were converted into coke.

The officers are: M. H. Clift, Chattanooga, Tennessee, president; J. T. Williams, Chattanooga, Tennessee, treasurer and general manager; J. W. Clift, Soddy, Tennessee, secretary; A. Lloyd, Soddy, Tennessee, general superintendent.

They employ about 400 hands, and pay sixty-eight cents per ton for run of mines. They ship to Georgia, Alabama, Louisiana, Mississippi and Texas.

WALDEN RIDGE COAL COMPANY.

Postoffice—Sale Creek, Hamilton County, Tennessee.

The mines of this company are about one and one-quarter miles from Rock Creek Station, on the Cincinnati Southern Railroad, on a broad gauge spur track, and twenty-eight miles north of Chattanooga. They work two seams of coal, both of which dip with a

slope of about one in five with the general direction of the mountain. Both seams are worked from one main entry, as they are but twenty-five feet apart. The lower (a three-foot seam) is used for coking exclusively; the upper, a three to four-foot seam, for steam and domestic purposes. Here shots are fired at any time, but at the request of the inspector they promised to fire but twice per day—at dinner and quitting time. The upcast is 150 feet above the intake, and the natural ventilation and drainage good. There are two means of egress for the miners—one in bad shape; they promise to remedy this.

The officers are: M. H. Clift, president, Chattanooga, Tennessee; J. T. Williams, treasurer and agent, Chattanooga, Tennessee; J. W. Clift, secretary, Soddy, Tennessee; A. Lloyd, superintendent, Soddy, Tennessee; Wm. Lloyd, assistant superintendent, Sale Creek, Tennessee.

Thirty-five coke ovens are in operation. They pay sixty-three cents per ton for mining (run of mines) for lower seam and sixty-one cents for upper seam.

The output for 1883-4, to November 1, is 15,503 tons of coal, and 404,949 bushels of coke.

DAYTON COAL AND IRON COMPANY (*Limited*).

Postoffice—Dayton, Rhea County, Tennessee.

The mines of this company are now in process of development. They are only driving main and butt entries, and have just constructed an air shaft of brick seventy-five feet high, and are putting up the furnace for ventilation. The present ventilation is only fair, but we hope to see an improvement after the ventilating apparatus is in operation. They have opened two seams of coal, but are only working the lower, employing about twenty-five miners. The coal is from two to three feet thick, averaging two and a half feet, and rests on a stratum of fire clay, which is also mined for their fire brick works. They are now constructing two blast furnaces and 200 coke ovens. They have a railroad from the Tennessee river to the mine seven miles long. This also connects them with the Cincinnati Southern, two and a half miles distant, and thirty-eight miles north of Chattanooga.

The miners are paid seventy-five cents per ton for run of mines

less than twenty-four inches; sixty-seven cents per ton, run of mines, between twenty-four and thirty-two inch seam, and sixty cents per ton, run of mines, for all coal over thirty-two inch seam. The number of hands employed in various departments varies from 100 to 700.

East Tennessee is the only market now supplied, as they expect to convert their entire output into coke to supply their blast furnaces.

The officers are John H. Ferguson, Dayton, Tennessee, managing director; Henry W. Hargreaves, Dayton, furnace manager; Martin Shalliday, Dayton, superintendent of mines; George H. Cushman, Dayton, civil engineer; David D. Jones, Dayton, architect; Percival Johnson, Dayton, cashier.

The principal directors are: Edward Salt, England; Titus Salt, England; Charles Stead, England; William Stead, England; William A. Donaldson, England; Robert Donaldson, England; A. S. McClelland, England.

Output for 1883 and to November, 1884, coal, 4,989 tons; coke, 90,139 bushels.

POPLAR CREEK REGION.

The coal of the Poplar Creek region is entirely different from that of the Walden Ridge proper; it is harder, a very fine domestic and gas coal, and is not used for cooking purposes.

The mines of this district are all located within a radius of three miles, and are all newly opened, a railroad, the Walden Ridge Railroad, having been completed there only last June.

These coals lie in an undisturbed position, horizontally, or nearly so. The seam worked averages about three and a half feet, and mines in blocks. All are located between seventeen and twenty miles from Knoxville Junction, on the Cincinnati Southern Railroad, on the line of the Walden Ridge Railroad, a branch running from the former road, and are all in Morgan county.

MT. CARBON COAL COMPANY.

Postoffice—Oliver Springs, Anderson County, Tennessee.

This mine, the oldest of this region, has been opened about two years, and formerly shipped its output over a narrow-gauge railroad.

9—Ag.

They are working here two shifts per day, and have about twelve yards to go, and when connected with the entry toward which they are driving, will have five outlets.

They have an air shaft thirty feet high and a furnace. The ventilation and drainage are both very good.

They employ — miners, and pay — cents per ton for all over $1\frac{1}{2}$ inch screen.

OLIVER COAL COMPANY.

Postoffice—Oliver Springs, Anderson County, Tennessee.

These mines are in Morgan county, about two miles above Oliver Springs, and have only been shipping coal since October.1. They employ about thirteen men, and pay seventy-five cents per ton for clean coal. The mines have two outlets, and air is good.

Joseph Richards & Sons are lessees and managers.

POPLAR CREEK COAL COMPANY.

Postoffice—Oliver Springs, Anderson County, Tennessee.

They began shipping small amounts of coal about August 1, and have shipped since then 300 tons. The mines have two outlets and natural ventilation, not having gone far enough to provide artificial ventilation, but will require it in course of time.

They work sixteen men, and pay seventy-five cents per ton for mining clean coal.

The officers are: E. F. Wiley, president, Knoxville, Tennessee; W. J. Hornsby, secretary and treasurer, Knoxville, Tennessee.

WINTER'S GAP COAL COMPANY.

Postoffice—Oliver Springs, Anderson County, Tennessee.

This company are working two entries from the croppings, and are running them to a connection. They have about twelve men employed. The air at present is good. They have no artificial ventilation at present, but will need it as the work progresses.

The officers are: C. W. Bartlett, president, Knoxville, Tennessee; Thomas Phillips, secretary and superintendent mines, Oliver Springs, Tennessee; — — Hoyle, treasurer and manager, Oliver Springs, Tennessee.

EUREKA COAL COMPANY.

Postoffice—Oliver Springs, Anderson County, Tennessee.

These mines are in Morgan county. They have been shipping coal since October 15, and have shipped about 200 tons. They ship to Atlanta, Georgia, and Chattanooga, Tennessee. They have two outlets and an air shaft, and have driven only about 500 feet of main entry.

The officers are: Thomas J. Thomas, president, Oliver Springs, Tennessee; G. W. Smith, secretary, Oliver Springs, Tennessee; T. A. Jenkins, superintendent, Oliver Springs, Tennessee.

They employ about fourteen men, and pay seventy-five cents per ton for mining clean coal. The air is good.

OAKDALE IRON, COAL AND TRANSPORTATION COMPANY.

Lessees of the Walden Ridge Railroad, have opened a mine to supply their railroad with coal. The mine has only one entry, 600 feet long, driven at present.

The officers are: Charles A. Bulkley, president, New York; D. A. Carpenter, vice-president, Knoxville, Tennessee; E. F. Wiley, secretary and treasurer, Knoxville, Tennessee.

The present postoffice address of the company is Jenks, Roane county, Tennessee.

NELSON & BRAUSE

Have opened a new mine, one-quarter of a mile from Knoxville Junction, on the Cincinnati Southern Railroad, and on the Walden Ridge Railroad.

Their postoffice address is Houkville, Roane county, Tennessee. They are shipping no coal as yet.

ROANE IRON COMPANY,

Rockwood, Roane county, Tenn., on the Cincinnati Southern Railway, 70 miles from Chattanooga. These mines are in the disturbed strata of Walden Ridge, and have an inclination of 35°. The coal does not lie regularly in layers, but is conchoidal; sometimes it is entirely squeezed out; sometimes 30 feet thick, but would

average more than a 4-foot seam through the mines. A drum within the mines is used for raising the coal, the smoke of the engine escaping through a shaft in the side of the mountain. Two entries have been driven in from the mountain, one 125 feet higher than the other. The ventilation is natural from one entry to another, and is very good. Drainage is also good. They use the output of the coal mined to run their two blast furnaces, which have an aggregate capacity of 100 tons of pig metal per day; have 150 coke ovens. They employ about 225 miners and laborers about the mines, who receive 1½c per bushel for mining. The officers are: H. S. Chamberlain, President, Chattanooga, Tenn.; H. Clay Evans, Secretary, Chattanooga, Tenn.; M. M. Duncan, Superintendent, Rockwood, Tenn. Output of mines for 1883, and to November 1, 1884—coal, 185,252 tons; coke, 4,104,132 bushels.

GLEN MARY COAL AND COKE COMPANY,

Glen Mary, Scott county, Tenn. These mines are in a spur of the mountain, and have 5 outlets, differing in elevation about 30 feet, making their natural ventilation good. The coal varies from 2 ft. 8 in. to 3 ft. 6 in. in thickness. Have a dummy engine to carry the coal from the mines to the tip-house, three-quarters of a mile, and are enlarging the main entry so that it can run through the mine. The officers are: G. W. Darnall, President and Treasurer, Lexington, Ky.; J. P. Shaw, Secretary, Lexington, Ky.; John H. Clark, Superintendent, Glen Mary, Tenn.

BRIAR HILL COAL COMPANY,

Property of the Helenwood Coal Company, E. J. and Rus. E. Williams, lessees, Helenwood, Scott county, Tenn., on the Cincinnati Southern Railroad, 122 miles north of Chattanooga. These mines have been worked by another company, and the present lessees are putting things into shape at present; have an air shaft 50 feet high, and furnace 5x10 feet heating surface; air at in-take and up-cast good and fairly good through the mines; have but one outlet; are working to make connection with another; use powder, and make two blasts per day—at noon and at quitting time; \$1.00 per ton is paid for mining all over 1½ inch screen. The output from August 1 to November 1, 1884, was 2,000 tons. E. J. Williams, Manager, Helenwood, Tenn.; Rus. E. Williams, Secretary and Treasurer,

Helenwood, Tenn. From the present management, I think these mines will soon be among the best ventilated in the State. They ship to Kentucky, Tennessee and Georgia.

ÆTNA COAL AND MINING COMPANY,

Whiteside, Marion county, Tenn., on the Nashville & Chattanooga Railroad, 15 miles from Chattanooga. These mines have four outlets, and are ventilated by a furnace, 6 feet across the bars and 6 feet deep, and an air shaft 32 feet high. The drainage and ventilation are both good; roof also generally good. The seams of coal average 30 inches, and are in a spur of the Cumberland range. The mines are approached by an incline of 4,500 feet, in which the rise is 100 feet, operated by a stationary engine, and then another incline 3,300 feet long, with a rise of 600 feet on the gravity system. The cars are drawn the first 200 feet from the mine by wire ropes; then the seam is about horizontal, and mules are the motive power. They have 64 coke ovens on the line of the Nashville & Chattanooga Railroad. The coal is mined without blasting, and in entry driving only blast at 4 P. M. The officers are: Col. William Morrow, President, Nashville, Tenn.; D. B. Pillsbury, Manager; J. T. Hill, Secretary, Whiteside, Tenn. The output from January 1, 1883, to November 1, 1884, was—coal, 41,205 tons; coke, 533,436 bushels.

TENNESSEE COAL, IRON AND RAILROAD COMPANY.

Tracy City, Grundy county, Tenn. This company owns land in Marion, Grundy, Franklin, Sequatchie, Cocke, Greene and Bledsoe counties. Their coal mines and coke ovens are located at Tracy City, Tenn., about 20 miles from Cowan on the Nashville and Chattanooga Railroad, 110 miles from Nashville and 85 miles from Chattanooga. A broad gauge railroad, 20 miles in length, owned and operated by this company, runs from Cowan to Tracy City, and 8 locomotive engines of their own are employed in carrying the coal and coke from Tracy City to their blast furnaces and to Cowan. The coke is shipped to South Pittsburg, 61 miles distant, where they have two blast furnaces with aggregate capacity of 200 tons per day. They also supply their blast furnace at Cowan, 20 miles distant, which has a capacity and is now making 80 tons of pig metal per day. The iron mines of the company at Inman,

19 miles from South Pittsburg and 60 from Cowan, supply their ore in part. The company's round-house and machine shops are located at Tracy City. They have now in operation 404 coke ovens and have 162 in process of construction. The entries in the coal mines extend for more than 15 miles, and cover many acres of coal land. Each mine is in charge of a mining boss, and the whole under the general supervision of the mining overseer and the civil engineer. Some of the mines are worked by free labor and some by convict labor. The convicts have tasks assigned them and are paid for extra time. The mines, in detail, are as follows:

No. 1.—This mine has a furnace of 6x10 feet heating surface, and a shaft 30 feet high; two outlets; ventilation and drainage fair; convict labor. Work about 43 men and 9 mules here.

No. 2 and Rattlesnake.—These mines are ventilated together by a furnace of 6x6 feet heating surface and a 50 foot shaft. The ventilation of both and the drainage are very good. *No. 2* employs 45 men and 10 mules, *Rattlesnake*, 57 men and 6 mules.

East Fork.—This mine, worked in a spur of the mountain, has 9 or 10 openings and natural ventilation, which is fair. About 225 men are employed here.

Petersburg.—Not worked at present; has but one opening, but they will drive another to meet this before working the mine to any extent. Have a very fine body of coal here, 6 feet thick.

Lone Rock.—This mine is connected with the *East Fork* mines, and has two openings beside; has an air shaft 37 feet high, but no furnace; ventilation fair.

Of the above mines, Nos. 1 and 2, *Rattlesnake* and *Lone Rock*, are worked by convicts, and *East Fork* by free labor. The coal is of the same general character as the coal at Rockwood, only this is *in situ*, showing no signs of displacement. It is a coking coal of very good quality, and averages 3½ feet thick through the various mines.

The company ship through Tennessee and into Kentucky, Alabama, Georgia, along the Nashville, Chattanooga & St. Louis, and Memphis & Charleston Railroads.

The mining costs about 62½ cents per ton, run of mines, and the hauling from Tracy City to Cowan, 25 cents per ton.

The Tracy City Division employs about 1,100 men, of whom about 500 are convicts.

The officers are: J. C. Warner, President, Nashville, Tenn.; Nathaniel Baxter, jr., Vice-President, Nashville, Tenn.; A. M. Shook, General Manager, Tracy City, Tenn.; James Bowron, Secretary and Treasurer, Nashville, Tenn.; E. O. Nathurst, Superintendent, Tracy City Division, Tracy City, Tenn.; J. A. Short, Superintendent Cowan Division, Cowan, Tenn.; J. Lodge, Superintendent South Pittsburg Division, South Pittsburg, Tenn.; John Fater, Superintendent Inman Division, Inman, Tenn.

The shipments from January 1, 1883 to November 1, 1884, are: 251,174 tons, or 6,279,350 bushels coal; 185,729 tons, or 9,286,450 bushels coke.

Respectfully submitted,

CHAS. L. JUNGGERMAN,
Assistant Geologist and Inspector of Mines.

TENNESSEE SCHOOL REPORT,
1884.

ANNUAL REPORT
OF THE
STATE SUPERINTENDENT
—OF—
PUBLIC INSTRUCTION,
FOR THE
SCHOLASTIC YEAR, ENDING JUNE 30, 1884.

Submitted to the Governor.

THOMAS H. PAINE, State Superintendent.

NASHVILLE:
ALBERT B. TAVEL, PRINTER TO THE STATE.
1885.

DEPARTMENT OF PUBLIC INSTRUCTION.

OFFICE OF STATE SUPERINTENDENT,
NASHVILLE, TENN., Dec. 15, 1884.

To His Excellency WM. B. BATE,

Governor of Tennessee:

SIR—I have the honor to transmit herewith the Annual Report of the Superintendent of Public Instruction of the State, for the Scholastic Year ending June 30, 1884.

Very respectfully, your obedient servant,

THOMAS H. PAINE,

State Superintendent of Public Instruction.

REPORT.

It is again my duty to render an account of the high trust confided to me two years ago, by making a detailed report of my official proceedings during the last scholastic year, exhibiting a statistical account of receipts and expenditures for Public Schools, and of their general condition and progress. The maintenance of a well devised and uniform system of Public Schools, in its economic effects on society at large, has been so often presented to the people and discussed by legislative bodies, that further reference to it would be obtrusive. I beg, however, to say that we have great reason for congratulation: in for the general prosperity of the State, in the continued development of her resources, the progress of her commerce, the successful efforts of her authorities to encourage immigration, her schools and school interests have kept *pari passu*.

The reports of County and City Superintendents, a synopsis of which is herewith submitted, show a marked improvement on the work of last year, and indicate most conclusively that Tennessee is keeping pace with others in the general sisterhood of States, both as to a steady increase of interest in the cause of popular education and improvement in school management, and in methods of instruction.

AMENDMENTS TO THE SCHOOL LAW.

I shall, in this report, recommend only a few changes in the school law. The law as it now is, in the main, is a good one. It is plain in its leading provisions, and the people have become somewhat familiar with its general application. Radical changes would therefore create confusion. Still, there are several matters of detail concerning which the law might be much improved. But the importance of most of these modifications of the law may be brought to the attention of the Committees on Education and Common Schools of the two Houses of the General Assembly without encumbering this report with recommendations concerning them.

SUMMARIES.

The following summaries show the statistical condition of the Public Schools for the year ending June 30, 1884, including receipts and expenditures of public money.

SCHOLASTIC POPULATION BETWEEN SIX AND TWENTY-ONE YEARS
OF AGE.

White male.....	216,999
White female.....	203,998
Total white.....	420,997
Colored male.....	76,159
Colored female.....	74,673
Total colored.....	150,832
Grand total.....	571,829

This is exclusive of the counties of Anderson, Henderson and Jackson, from which reports are incomplete. The total scholastic population of these counties for the previous year was :

Anderson.....	4,467
Henderson	4,834
Jackson	4,261

Assuming there has been no change in these three counties, our entire scholastic population is now 585,391; an increase over that of the preceding year of 23,895.

NO. OF TEACHERS EMPLOYED.

White male.....	3,787
White female	1,623
Colored male	1,026
Colored female.....	492
Total	6,928
Increase.....	195

NO. OF SCHOOLS OPENED.

White	4,924
Colored.	1,471
Total.....	6,395

Number of School Districts.....	2,932
Number of graded schools included in the above.....	471
Number of consolidated schools included in the above.....	230
Number of schools controlled by City Boards	93
Number of Institutes held during the year.....	251
Number of teachers in attendance	2,622
Number of days continued.....	423
Number of schools visited by County Superintendents.	3,888
Number of public addresses delivered by County Superintendents.....	1,856
Number of first grade certificates issued.....	2,439

NO. OF APPLICANTS EXAMINED.

White male	3,987
White female.....	1,663
Colored male	1,200
Colored female.....	619
Total.....	7,469

NO. OF TEACHERS LICENSED.

White male..	3,553
White female.....	1,506
Colored male	975
Colored female.....	470
Total.....	6,504

NO. OF PUPILS ENROLLED DURING THE YEAR.

White male.....	140,719
White female.....	132,131
Colored male.....	38,873
Colored female.	38,420
Total.....	350,143

NO. OF PUPILS ENROLLED IN EACH BRANCH OF STUDY.

Orthography	269,518
Reading.....	233,430
Writing.....	160,123
Arithmetic	155,449
English Grammar.....	89,518

Geography	86,214
United States History.....	42,184
Elements of Geology.....	3,262
Elements of Agriculture.....	773

NO. AVERAGE DAILY ATTENDANCE.

White	160,966
Colored	44,513
Total.....	205,479
Increase over last year.....	29,675

FINANCIAL STATEMENT.

Receipts of School Money—

Amount on hand July 1, 1883.....	\$291,061.29
From State.....	147,863.93
From Counties.....	744,850.60
From all other sources.....	108,387.06
Total amount received	\$1,292,162.88
Increase over last year	\$87,424.48

EXPENDITURES.

Salaries of teachers.....	\$822,561.11
School sites, buildings and repairs.....	72,242.18
Furniture, fixtures, libraries and apparatus....	11,576.97
Amount Paid County Superintendents	20,232.40
Amount paid District Clerks	9,109.31
All other expenses.....	19,747 86
Total amount expended.....	\$955,469.83
Balance on hand June 30, 1884.....	\$336,693.05
Total amount disbursed and on hand.....	\$1,292,162.88

NO. AND CHARACTER OF SCHOOL HOUSES.

Stone or brick	137
Frame	2,449
Log.....	2,149
Total.....	4,735

NO. OF SCHOOL HOUSES ERECTED DURING THE YEAR.

Stone or brick.....	5
Frame.....	187
Log	74
Total.....	266

ESTIMATED VALUE OF SCHOOL PROPERTY.

Estimated value of school-houses.....	\$1,229,060 73
Estimated value school apparatus.....	39,207 40
Value of school-houses erected during the year.....	99,176 62
Total estimated value of school property.....	1,367,444 75

Average number of days taught during the year, 78.
 Average compensation of teachers per month, \$28.41.
 Average cost of tuition per pupil, per month, 59 cents.
 Decrease, 14 cents per pupil per month on that of last year.
 Number of counties levying additional poll-tax, 78.
 Number of counties levying additional property tax, 79.
 Number of counties levying additional privilege tax, 46.

PRIVATE SCHOOLS.

Number taught during the year, 893.
 Number of teachers employed, 1,085.
 Number of pupils enrolled, 33,743.
 Average daily attendance, 27,389.
 Average cost of tuition per pupil per month, \$1.70.

SAVING BY PUBLIC SCHOOLS..

I desire to renew the reference made in my annual report of last year to the saving by public schools. The great economy involved in our system of public instruction is shown to a better advantage in the report of the year just closed than in any previous year. By reference to our statistical tables it is seen that the average cost of tuition per pupil per month in our private schools is \$1.70, while that of the public schools is 59 cents, thus making a difference of \$1.11 per pupil per month in favor of public schools. Taking into account the number of pupils enrolled in the public schools last

year (350,143), the amount saved is \$388,658.73 per month, or, \$1,943,293.65 for a term of five months. Our figures show the actual cost of tuition in the public schools, while every one who is familiar with the cost of tuition in private schools must admit that the above average of \$1.70 per pupil per month is a fair if not a low estimate. It should be borne in mind that our reports from private schools are obtained by means of blank forms furnished by this department to county superintendents, whose duty it is to make inquiry of the teachers of private schools in their respective counties, and fill these blanks according to the teachers' reports, and return the same with their annual reports to the State Superintendent.

NORMAL INSTITUTES.

The habit on the part of our teachers of clinging to old methods, simply because they are old, is gradually giving way to the better results of the more improved methods of the present day, in holding on to what is good in the old, and adopting what is good in the new. Unfortunately, however, an impression prevails, to a considerable extent among our public school authorities, that any educated person is qualified to teach school. It might as well be claimed that any person who understands mathematics and astronomy is therefore qualified to navigate a ship. A person may be well educated in the common acceptation of that term, and yet be a failure as a teacher. He may never have given a thought to the science and delicate work of teaching; the many excellent works on methods of instruction, prepared by able writers on education, may be to him mere myths; he may have failed as a lawyer or physician, and yet, because he has a diploma from some high school or college, he is employed to teach "the district school." It is generally admitted that after a man has acquired an education, such as is provided for in our colleges, he must study the science and the art of a profession before he can hope to attain success in it. Teaching, which is perhaps the most delicate and difficult of all professions, should not be made an exception to this general rule. After a person has acquired a knowledge of the branches to be taught, he must then study the art and science of teaching them. It is true, there are some "born teachers," but they constitute the exception and not the rule. Every one who is at all familiar with the practical workings of our

system of education will at once recognize the importance of professional training to prepare the teacher for the work before him. Our State Normal College is doing excellent work in this direction, but its advantages are far too limited to reach the great majority of our teachers. Only a few enjoy these advantages. The only professional training given most of our teachers is obtained in Normal Institutes. Early in the year it was decided to hold as many of these Institutes as possible, with the means at our command for the purpose, under the immediate supervision of the State Superintendent. Accordingly, they were held at the following places, viz.: Covington, one week; Humboldt, one month; Lewisburg, one month; Mont Eagle, one month, and Knoxville, one month. These were all aided by an appropriation from the Peabody Fund. Three Institutes for colored teachers were held in the State for a period of about one month each. These were supported by a part of the Peabody appropriation.

In addition to these Institutes aided by this fund, several county Normal Institutes were held, one at Lebanon, Gallatin, and Greeneville, and some others.

In all these Institutes were employed some of our best teachers in graded schools, and ablest professors in academies, colleges and universities. It is gratifying to add that much interest was manifested by the people in whose midst these exercises were had, while the teachers attending as pupils were almost unanimous in their praise of the work, and in their acknowledgment of the great benefit it was to them.

COUNTY INSTITUTES.

Many county superintendents, appreciating the importance of such a course, organized County Institutes or educational associations, in which their teachers could meet and mingle, and interchange views on methods of instruction. In some of these, experts were employed to lecture on the most generally approved methods of imparting instruction. Much good grows out of these county teachers' meetings, in that, while the teachers themselves share great benefits, the people who attend become interested, and a healthier public sentiment in favor of free education is created.

Most of these County Institutes are much embarrassed by a want

of means to meet necessary expenses, having to rely entirely on private contributions. They are, therefore, of short duration. Now, realizing that the highest welfare of the State is bound up with its schools, and having seen how inadequate and unsatisfactory many of them are on account of inefficient instruction, discipline and general management, I have deemed it my duty, after much reflection, to suggest legislation on this matter, making a small appropriation to be drawn on requisition of the State Superintendent, (as other expenses of this department are) for the support of Institutes. If we could have one good Institute in each Senatorial District of the State, for the benefit of both white and colored teachers, for a period of one month, judiciously and intelligently conducted, through which the faculty and graduates of our Normal College, and other able and experienced educators could bring their instruction to bear upon the great body of our teachers scattered through the various counties, we should see, I apprehend, a marked improvement of our schools of every grade throughout the State. In this way the influence of the Normal College and that of the Public Schools would become reciprocal. An organic connection would be established between them. The spirit and methods of the professional institution would work downward and be diffused through the public schools, while sympathy and patronage would come back from the teachers of the State to give support and public favor to that institution. The sum of \$5,000 per annum, economically used, would meet this expense for both white and colored Institutes, for the instructors employed in one could give a part of their time to the other, both being held at the same time and place. Then, with one grand central Institute at some eligible place in the State, or one for each grand division of the State, to be held for one month in midsummer, such as we have a right to believe the Peabody fund would support, I have no doubt all would at once be regarded with public favor as an important adjunct of our educational system, and as essential to its continued elevation and prosperity. Especially would I recommend that the County Courts be authorized by law to make appropriations for Institute purposes in all counties where they are inclined to do so. I herewith submit a resolution, adopted by the Board of Trustees of the Peabody Education Fund at their late session, as follows:

“On motion of Governor Fish, it was

Resolved, That this Board approve the suggestion made in the Report of the General Agent, that the policy applied to schools, of helping only those communities which help themselves, be also applied to States in reference to Institutes."

PEABODY AID.

In addition to an appropriation of \$9,000 to the State Normal College, and \$2,800 to the support of fourteen scholarships in that institution, the sum of \$1,700 was forwarded by Dr. J. L. M. Curry, the General Agent of the Peabody Education Fund, to the State Superintendent for educational purposes in Tennessee. Of this sum, the city schools of Jackson, for special reasons, were paid \$200; the remainder of \$1,500 was used in the support of Normal Institutes, elsewhere referred to in this report. Thus it is seen that exclusive of the appropriation to the Normal College, Tennessee is favored with a large share of the benefits of the income of this Fund.

From the recommendation of the General Agent, in his able and comprehensive report, made to the Board of Trust, at their last meeting in New York, we are justified in inferring that, except for special reasons and extraordinary emergencies, aid to schools will be withdrawn, and the income of the Fund will be appropriated to the promotion of the efficiency of teaching. The General Agent uses the following explicit language:

"The States which comprise the field of the operations of the Fund gradually increase in their material resources. With advancing prosperity come corresponding ability and inclination to foster general education. With increased taxable property school revenues increase. The Fund is interested in the development of wealth, as the establishment, maintenance, and improvement of free schools are affected thereby. With the excellent models which are before us to be copied and adapted to local and exceptional conditions, we have a right to expect wiser measures and higher ideals. The first work of the Fund was to aid in the establishment of public school systems. That being unalterably accomplished, the obvious duty now is to look to the character of the schools, and so to direct your helpful appropriations as to co-operate most efficiently in making them better. It is gratifying that the public sentiment

having been won to the favor of free schools, is now logically directed to their elevation, which is, of course, to be wrought through the agency of better teaching."

STATE TEACHERS' ASSOCIATION.

The twentieth annual session of the State Teachers' Association was held at Paris, October 1884. The attendance and interest were good, both on the part of the teachers and citizens of the town. The people of Paris evinced that hospitality for which they are noted, in their entertainment of the members of the association and other visitors, and manifested a very high appreciation of the work of the session.

The colored teachers held their State Institute in Nashville, and report an interesting and profitable session.

COUNTY SUPERINTENDENTS.

To secure efficient County Superintendents over the State, I think it would be well to graduate their compensation according to the service rendered. This can be done in two ways, either by paying them a salary in proportion to the School fund of each county and the scholastic population of the same, or by allowing them compensation for the number of schools visited by them, teachers examined, Institutes held, reports made in accordance with law, and other work pertaining to the duties of their office. Either of these modes of compensation would greatly encourage them in their work, and increase its efficiency.

PHYSIOLOGY AND HYGIENE.

It may be well to remark, that the propriety of adding to our public school curriculum another branch of study, that of Physiology and Hygiene, is worthy the attention of our Legislature. If our State Board of Health should be empowered to recommend some work on this subject, written with especial reference to the influence of alcoholic stimulants and narcotics on the human system, and the same should be added to the public school course, good results would doubtless follow. It is believed that if boys should be impressed with the scientific conclusion that both alcohol and tobacco are deleterious to the human system, and that habitual in-

dulgence in the use of such will injure and tend to destroy vitality and render them unfit for the great duties of life, they will necessarily avoid the use of the same. Let this fact be taught them by a good text book, as any other scientific principle is taught, and they will be governed in act by the one as they are by the other. Let them know the effect of these stimulants and narcotics on the stomach, the brain, and the nervous system genenerally; let this be taught them before the habit is formed, and it is believed, that no other agency will more effectively promote the cause of temperance and at the same time bring about a healthful physical development on the part of the youth of our State.

NEW ORLEANS EXHIBIT.

The United States Commissioner of Education at Washington has invited Tennessee to make an educational exhibit at the World's Industrial and Cotton Centennial Exposition at New Orleans. I have therefore appointed Professor Frank Goodman, of Nashville, as Commissioner for Tennessee, to take charge of the work of supervising the exhibit, which he is doing with his usual energy and enterprise. He will make a report of the same in due time. He is very much embarrassed by a want of funds to make such display of our school work as would show the State to advantage.

THANKS TO THE PRESS.

The press throughout the State have shown much liberality by lending their influence to the great cause of popular education. We ask them to accept our thanks for many courtesies shown us in our intercourse with them throughout the State.

THANKS TO CITY SUPERINTENDENTS.

I acknowledge my thanks to the superintendents of the schools of the various cities of the State for their prompt responses to a request to furnish reports of their work, all of which show gratifying progress.

CONCLUSION.

I desire to again tender my sincere thanks to my associate, Col. Leon Trousdale, for his valuable counsel and active aid in the discharge of the duties imposed upon this office.

To the people of the State, who have everywhere given me a cordial welcome, I renew my thanks for their kind treatment and words of encouragement in their cooperation with me in an effort to promote the continued improvement of our schools.

To your Excellency, I am indebted for wise and willing counsel, and for liberal encouragement in my official endeavors.

Very respectfully,

THOMAS H. PAINE.

APPENDIX.

2—School.

TABLE I.

Statement of the Scholastic Population of Tennessee, between the ages of six and twenty-one years, on the 30th day of June, 1883, as enumerated by the District Clerks and Treasurers, and reported by the Superintendents for the various Counties to the State Superintendent of Public Instruction.

COUNTIES.	WHITE.			COLORED.			TOTAL.
	Male.	Female	Total.	Male.	Female	Total.	Between 6 and 21.
Anderson							4,467
Bedford	3,485	3,320	6,805	1,476	1,357	2,833	9,638
Benton	1,732	1,706	3,438	116	101	217	3,655
Bledsoe	989	922	1,911	127	112	239	2,150
Blount	2,805	2,628	5,433	294	319	613	6,046
Bradley	2,156	2,050	4,206	276	258	534	4,740
Campbell	2,414	2,062	4,476		138	138	4,614
Cannon	2,100	1,950	4,050	310	290	600	4,650
Carroll	3,116	3,045	6,161	901	940	1,841	8,002
Carter	2,124	1,990	4,114	137	118	255	4,369
Cheatham	1,205	1,083	2,288	312	255	567	2,855
Chester	1,340	730	2,070	623	380	1,003	3,073
Claiborne	2,687	2,326	5,013	155	141	296	5,309
Clay	1,280	1,156	2,436	80	72	152	2,588
Cocke	2,541	2,423	4,964	245	205	450	5,414
Coffee	2,128	2,329	4,457	344	371	715	5,172
Crockett	1,964	1,955	3,919	738	699	1,437	5,356
Cumberland	1,200	96	1,996	11	1	12	2,008
Davidson	8,832	8,939	17,831	5,932	6,225	12,157	29,988
Decatur	1,408	1,400	2,808	244	225	469	3,277
DeKalb	2,773	2,373	5,146	220	211	431	5,577
Dickson	1,987	1,877	3,864	284	268	552	4,416
Dyer	2,332	2,115	4,447	818	808	1,626	6,073
Fayette	1,535	1,659	3,194	3,673	3,540	7,213	10,407
Fentress	964	810	1,774	4	4	8	1,782
Franklin	2,590	2,359	4,949	595	573	1,168	6,117
Gibson	4,824	4,301	9,125	1,873	1,822	3,695	12,820
Giles	4,089	3,577	7,666	3,040	2,732	5,772	13,438
Grainger	2,122	2,202	4,324	150	143	293	4,617
Greene	4,478	4,136	8,614	460	401	861	9,475
Grundy	1,050	1,049	2,099	32	16	48	2,147
Hamblen	1,716	1,611	3,327	323	350	673	4,000
Hamilton	3,506	3,209	6,715	1,450	1,453	2,903	9,618
Hancock	1,847	1,651	3,498	69	61	130	3,628
Hardeman	2,397	2,208	4,605	1,928	1,838	3,767	8,372
Hardin	2,850	2,751	5,601	403	398	801	6,402
Hawkins	3,420	3,359	6,779	826	478	1,304	8,083
Haywood	1,461	1,387	2,848	3,046	2,970	6,016	8,864
Henderson							4,834
Henry	2,789	2,695	5,484	1,321	1,335	2,656	8,140
Hickman	1,964	1,998	3,962	425	460	885	4,847
Houston	682	624	1,306	135	135	270	1,576
Humphreys	1,852	1,767	3,619	298	286	584	4,203
Jackson							4,261
James	777	694	1,471	126	101	227	1,698

TABLE I.—Continued.

COUNTIES.	WHITE.			COLORED.			TOTAL.
	Male.	Female	Total.	Male.	Female	Total.	Between 6 and 21.
Jefferson	2,262	2,792	5,054	480	560	1,040	6,094
Johnson	1,491	1,420	2,911	90	81	171	3,082
Knox	6,590	6,117	12,707	1,318	1,261	2,579	15,286
Lake	473	478	951	113	112	225	1,176
Lauderdale	1,744	1,569	3,303	1,226	1,188	2,414	5,717
Lawrence	1,901	1,679	3,580	162	120	282	3,862
Lewis	416	331	747	42	29	71	818
Lincoln	3,802	3,594	7,396	1,216	1,113	2,329	9,725
London	1,393	1,310	2,703	291	269	560	3,263
Macon	1,709	1,562	3,271	159	164	323	3,594
Madison	2,560	2,481	5,041	2,762	2,966	5,728	10,769
Marion	1,714	1,715	3,429	245	248	493	3,922
Marshall	2,741	2,525	5,266	991	914	1,905	7,171
Maury	3,805	3,596	7,401	3,239	3,322	6,561	13,962
McMinn	2,415	2,369	4,784	699	659	1,358	6,142
McNairy	2,630	2,443	5,073	389	448	837	5,910
Meigs	1,178	1,149	2,327	159	184	343	2,670
Monroe	2,580	2,373	4,953	261	213	474	5,427
Montgomery	2,466	2,358	4,824	2,399	2,507	4,906	9,730
Moore	1,015	985	2,000	115	125	240	2,240
Morgan	1,184	1,014	2,198	24	19	43	2,241
Obion	4,275	3,962	8,237	831	818	1,649	9,886
Overton	1,927	2,051	3,978	67	46	113	4,091
Perry	1,408	1,310	2,718	90	113	203	2,921
Pickett	805	651	1,456	11	13	24	1,480
Polk	1,312	1,294	2,606	73	73	146	2,752
Putnam	2,350	1,958	4,308	151	91	242	4,550
Rhea	1,387	1,547	2,934	179	190	369	3,303
Roane	2,747	2,626	5,373	433	398	831	6,204
Robertson	2,448	2,381	4,829	879	830	1,709	6,538
Rutherford	3,773	3,640	7,413	3,142	3,112	6,254	13,667
Scott	1,389	1,026	2,415	45	48	93	2,508
Sequatchie	512	449	961	10	8	18	979
Sevier	3,075	2,940	6,015	56	67	123	6,138
Shelby	6,625	6,562	13,187	9,268	9,281	18,549	31,736
Smith	2,702	2,406	5,108	623	643	1,266	6,374
Stewart	1,848	1,773	3,621	473	519	992	4,613
Sullivan	3,276	3,044	6,320	239	226	465	6,785
Sumner	2,831	2,923	5,754	1,290	1,241	2,531	8,285
Tipton	2,099	1,872	3,971	2,133	2,051	4,184	8,155
Trousdale	752	611	1,363	378	390	768	2,131
Unicoi	701	597	1,298	21	10	31	1,329
Union	3,016	1,826	4,842	28	20	48	4,890
Van Buren	574	534	1,108	25	27	52	1,160
Warren	2,266	2,204	4,470	412	427	839	5,309
Washington	2,893	2,754	5,647	279	277	556	6,203
Wayne	1,988	1,905	3,893	194	169	363	4,256
Weakley	3,990	3,991	7,981	810	752	1,562	9,543
White	2,019	1,904	3,923	192	189	381	4,304
Williamson	2,880	2,764	5,644	2,154	2,076	4,230	9,874
Wilson	3,491	3,421	6,912	1,473	1,475	2,948	9,860
TOTAL	216,999	203,998	420,997	76,159	74,673	150,832	585,391

TABLE II.—INTEREST SCHOOL FUND—*Tabular Statement showing the semi-annual apportionment among the several Counties of the State, according to scholastic population, for the years 1883 and 1884.*

COUNTIES.	1883.			1884.		
	April.	October.	Total.	April.	October.	Total.
Anderson	\$523 77	\$548 15	\$1071 92	\$599 65	\$546 20	\$1145 85
Bedford	1079 84	1129 88	2209 52	1248 55	1137 27	2385 82
Benton	281 17	294 26	575 43	476 55	434 07	910 62
Bledsoe	260 03	272 12	532 15	281 91	256 77	538 68
Blount	719 59	753 08	1472 67	772 92	703 94	1476 78
Bradley	548 40	573 93	1122 33	623 55	567 97	1191 52
Campbell	545 43	570 84	1116 27	599 65	546 20	1145 85
Cannon	538 95	564 03	1102 98	604 07	550 23	1154 30
Carroll	966 92	1011 93	1978 85	1057 67	963 40	2021 07
Carter	503 12	526 54	1029 66	578 44	526 88	1105 32
Cheatham	342 02	357 93	699 95	373 72	340 42	714 14
Chester	618 57	647 36	1265 93	667 44	330 15	1000 59
Claiborne	303 32	317 44	620 76	343 79	607 95	1275 39
Clay	653 03	683 43	1336 46	708 37	313 15	656 94
Cooke	626 41	655 56	1281 97	662 74	645 25	1353 62
Coffee	608 25	636 55	1244 80	707 71	603 67	1266 41
Crockett	245 84	257 28	503 12	251 29	644 63	1352 34
Cumberland	3429 14	3588 74	7017 88	3832 79	228 89	480 18
Davidson	389 41	407 53	796 94	441 52	3491 19	7323 98
DeKalb	687 99	720 04	1408 03	748 12	402 17	843 69
Dickson	570 43	596 97	1167 40	636 16	681 43	1429 55
Dyer	742 73	777 30	1520 03	816 72	579 46	1216 62
Fayette	1272 85	1332 09	2604 94	1050 15	743 92	1560 64
Fentress	213 49	223 43	436 92	212 24	956 55	2006 70
Franklin	752 81	788 89	1542 70	783 96	193 32	405 56
					714 08	1498 04

Gibson...	1491 07	1560 46	3051 53	1686 72	1536 38	3223 10
Giles	1619 96	1695 35	3315 31	1704 97	1533 02	3257 99
Grainger	531 11	555 83	1086 94	601 13	547 55	1148 68
Greene	1100 05	1151 93	2251 28	1231 25	1121 50	2352 75
Grundy	256 41	268 34	524 75	278 82	253 96	532 78
Hamblen	460 20	481 62	941 82	526 89	479 92	1006 81
Hamilton	934 33	977 81	1912 14	1134 86	1033 72	2168 58
Hancock	422 25	441 94	864 19	468 57	417 69	876 26
Hardeman	988 69	1034 74	2023 43	1082 88	986 27	2069 15
Hardin	718 61	752 01	1470 65	838 59	763 45	1602 44
Hawkins	917 53	960 24	1877 77	1051 09	957 42	2008 51
Haywood	1086 86	1137 44	2224 30	1137 14	1035 79	2172 93
Henderson	785 53	822 09	1807 62	648 92	591 07	1239 99
Henry	959 46	1004 12	1963 58	1030 02	938 22	1468 24
Hickman	568 19	594 63	1162 82	647 83	590 09	1237 92
Houston	178 16	186 44	364 60	197 87	180 23	378 10
Humphreys	498 76	521 98	1020 74	540 85	492 65	1033 50
Jackson	530 12	554 79	1084 91	571 99	521 02	1093 01
James	214 87	324 86	439 73	236 39	215 32	451 71
Jefferson	753 43	788 49	1341 92	811 35	739 04	1550 39
Johnson	371 87	389 17	761 04	408 75	372 32	781 07
Knox	1402 98	1468 27	2371 25	1930 89	1758 80	3689 69
Lake	161 66	158 72	310 38	166 33	151 49	317 82
Lauderdale	626 04	655 18	1281 22	748 25	681 56	1429 81
Lawrence	440 66	461 18	901 84	484 74	441 53	926 27
Lewis	103 01	107 84	210 85	106 05	96 59	202 64
Lincoln	1185 39	1240 56	2425 95	1272 46	1159 05	2431 51
London	378 83	396 46	775 29	408 63	372 20	780 83
Macon	407 07	426 02	833 09	464 47	423 07	887 54
Madison	1328 96	1390 84	2719 80	1353 81	1233 15	2556 96
Marion	467 41	489 17	956 58	520 05	473 69	993 74
Marshall	815 89	853 86	1669 75	897 93	817 89	1717 82
Maury	1798 74	1822 45	3681 19	1958 95	1784 36	3743 30
McMinn	748 46	783 29	1531 75	790 27	719 83	1510 10
McNairy	817 13	855 16	1672 29	761 81	693 92	1455 73
Meigs	258 96	312 88	611 84	334 53	304 70	639 23
Monroe	656 77	687 33	1344 10	708 92	645 74	1354 66

TABLE II.—Continued.

COUNTIES.	1888.			1884.		
	April.	October.	Total.	April.	October.	Total.
Montgomery.....	\$1152 42	\$1206 06	\$2358 48	\$1268 69	\$1155 62	\$2424 31
Moore	280 18	283 22	573 40	294 53	268 27	562 80
Morgan.....	252 18	263 92	516 10	294 79	268 52	563 31
Obion.....	1028 38	1076 25	2104 63	1249 89	1138 50	2388 39
Overton.....	506 60	530 19	1036 79	478 97	435 27	915 24
Perry	342 01	357 93	699 94	365 87	333 07	698 74
Pickett.....	185 87	194 53	380 40	208 08	189 52	397 60
Polk	328 94	344 26	673 20	374 53	341 15	715 68
Putnam	558 61	584 61	1143 22	589 31	536 79	1126 10
Rhea	352 33	368 73	721 06	411 98	375 27	787 25
Roane	715 49	748 79	1464 28	774 56	705 52	1480 08
Robertson.....	807 68	846 27	1652 95	860 27	774 48	1624 75
Rutherford	1654 18	1731 16	3385 34	1832 09	1668 80	3500 89
Scott.....	338 90	354 67	693 57	360 84	328 67	689 51
Sequistchie	120 55	126 17	246 72	129 81	118 24	248 05
Sevier.....	741 74	776 26	1518 00	820 88	747 72	1568 60
Shelby	3401 27	3559 17	6960 44	3792 93	3454 89	7247 82
Smith.....	781 67	818 06	1599 73	823 56	750 16	1573 71
Stewart	566 69	593 06	1159 75	622 87	567 35	1190 22
Sullivan.....	786 28	822 88	1609 16	908 27	827 32	1735 59
Sumner.....	1035 47	1083 67	2119 14	1117 68	1018 07	2135 75
Tipton.....	962 94	1007 76	1970 70	999 15	910 09	1909 24
Trousdale	272 46	285 15	557 61	292 91	266 80	559 71
Union	169 07	176 95	346 02	179 08	163 12	342 20
Van Buren.....	482 59	505 05	987 64	529 44	482 25	1011 69
	133 87	140 10	273 97	142 02	129 87	271 89

Warren	615 96	644 63	1260 59	699 52	637 17	1336 69
Washington	738 25	772 62	1510 87	820 33	747 22	1567 55
Wayne.	500 13	523 41	1023 54	552 79	503 52	1086 31
Weakley.....	1113 98	1165 82	2279 80	1247 22	1136 05	2383 27
White.....	473 38	495 42	968 80	549 71	500 72	1050 43
Williamson.....	1306 94	1367 76	2674 70	1318 89	1201 35	2520 24
Wilson.....	1177 55	1232 09	2409 64	1296 74	1181 17	2477 91
Total	\$68324 29	\$71503 74	\$139828 03	\$75375 00	\$69856 77	\$144031 77

1883.

Paid to Counties.....	\$139,828 03
Paid Expenses.....	7,842 11
Paid Salary of Superintendent of Public Instruction.....	2,454 96
Paid Clerk of Superintendent of Public Instruction.	624 90
Total	\$150,750 00

1884.

Paid to Counties.....	\$144,031 77
Paid Expenses.....	4,389 56
Paid Salary of Superintendent of Public Instruction.....	1,828 75
Paid Clerk of Superintendent of Public Instruction.....	499 92
Total	\$150,750 00
Total paid out on account of Interest Permanent School Fund.....	\$301,500 00

TABLE III.

Showing the Number of Teachers employed, and the Number of Schools in each County, Number of School Districts in each County, and Number of Graded, Consolidated and City Schools.

COUNTIES.	NO. OF TEACHERS EMPLOYED.					NO. OF SCHOOLS AND DISTRICTS.						
	White Male.	White Female.	Colored Male.	Colored Female.	Total.	White.	Colored.	Total.	No. of School Districts in Co.	No. of Graded Schools.	No. of Consolidated Schools.	No. Schools controlled by City Bds
Anderson	52	37	19	12	120	63	30	93	21	15	11	2
Bedford	39	19	6	.....	64	56	6	62	69	.....	.....	2
Benton	25	18	5	1	49	37	6	43	14	2	2	.....
Bledsoe	53	21	5	3	82	72	7	79	18	3	2	.....
Blount	31	6	8	5	50	37	13	50	15	.....	4	2
Bradley	44	11	1	3	59	46	4	50	48	.....	3	.....
Campbell ..	62	6	6	4	78	57	9	66	15	.....	.....	.....
Cannon	82	29	24	4	139	105	28	133	36	3	1	5
Carroll	27	10	3	2	42	37	5	42	13	2	1	.....
Carter	29	8	8	7	52	37	15	52	52	15	.....	1
Cheatham ..	27	5	5	2	39	32	7	39	32	2	.....	2
Chester	52	12	5	2	71	71	7	78	75	24	.....	1
Claiborne ..	27	8	2	.....	37	35	2	37	38	2	3	1
Clay	56	10	6	4	76	65	11	76	76	.....	2	.....
Cocke	37	14	4	6	61	51	10	61	50	.....	.....	6
Coffee	30	8	16	2	56	38	18	56	45	.....	.....	.....
Crockett	16	13	.....	.....	29	29	.....	29	43	.....	1	.....
Cumberland ..	50	123	36	32	241	84	58	142	27	142	4	13
Davidson	38	5	6	3	52	43	9	52	47	.....	.....	1
Decatur	60	11	8	3	82	71	11	82	20	3	2	3
DeKalb	41	35	12	2	90	76	14	90	12	1	2	.....
Dickson	20	18	9	4	51	42	10	52	44	3	2	1
Dyer	19	20	45	10	94	39	55	94	15	1	12	.....
Fayette	33	5	.....	.....	38	38	.....	38	14	1	2	.....
Fentress	41	19	11	7	78	54	17	71	10	.....	.....	.....
Franklin	81	37	34	10	162	88	39	127	25	8	4	1
Gibson	74	31	32	14	151	100	44	144	20	.....	7	2
Giles	43	7	6	.....	56	50	6	56	60	4	3	1
Grainger	88	21	15	4	128	102	19	121	27	.....	7	.....
Greene	27	4	1	32	64	1	29	30	1	1	1	1
Grundy	30	11	8	4	53	35	13	48	33	2	13	.....
Hamblen	36	33	15	10	94	41	16	57	19	5	2	5
Hamilton	38	5	1	.....	44	42	1	43	17	3	.....	1
Hancock	50	29	29	10	118	79	44	123	20	5	5	.....
Hardeman	63	17	11	7	98	80	25	105	77	3	2	.....
Hardin	71	17	5	5	98	88	10	98	19	7	4	.....
Hawkins	26	20	40	23	109	44	60	104	13	.....	3	.....
Haywood .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Henderson	56	37	25	7	125	88	32	120	42	4	3	.....
Henry	53	10	14	5	82	.....	.....	63	1	.....	.....	.....
Hickman	23	2	6	1	32	25	7	32	9	.....	.....	.....
Houston .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

TABLE III.—Continued.

COUNTIES.	NO. OF TEACHERS EMPLOYED.					NO. OF SCHOOLS AND DISTRICTS.						
	White Male.	White Female.	Colored Male.	Colored Female.	Total.	White.	Colored.	Total.	No. of School Districts in Co.	No. of Graded Schools.	No. of Consolidated Schools.	No. Schools controlled by City Bds.
Humphreys	35	12	5	1	53	56	5	61	22	2	.....	.....
Jackson .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
James	17	.....	5	1	23	17	6	23	8	.....	3	.....
Jefferson	49	14	16	6	85	58	22	80	59	14	3	3
Johnson	33	.....	1	.....	34	31	1	32	10	3	3	.....
Knox	91	60	20	8	179	100	20	120	22	120	4	10
Lake	7	2	3	.....	12	15	3	18	6	.....	1	.....
Lauderdale	21	17	25	6	69	38	31	69	12	3	2	.....
Lawrence	51	14	4	1	70	65	5	70	15	1	6	1
Lewis	6	4	1	2	13	10	3	13	13	.....	.....	.....
Lincoln	45	52	21	11	129	89	32	121	25	.....	7	.....
Loudon	28	13	6	4	51	39	9	48	11	.....	.....	.....
Macon	45	7	3	3	58	52	6	58	45	1	.....	.....
Madison	29	81	28	9	97	50	41	91	22	.....	.....	2
Marion	38	11	5	1	55	47	8	55	52	3	1	.....
Marshall	35	45	18	12	110	63	25	88	55	7	4	4
Mauzy	56	38	33	14	141	78	50	128	26	4	23	2
McMinn	40	23	12	4	79	63	16	79	79	3	2	.....
McNairy	56	14	15	5	90	70	20	90	84	2	.....	.....
Meigs	24	2	5	3	34	26	8	34	8	.....	2	3
Monroe	43	14	7	1	65	57	8	65	20	4	4	2
Montgomery	34	45	29	10	118	69	36	105	21	8	2	.....
Moore	10	12	1	2	25	24	2	26	16	.....	.....	1
Morgan	33	2	.....	.....	35	34	.....	34	37	.....	.....	.....
Obion	73	14	9	6	102	81	15	96	78	4	3	2
Overton	37	45	1	3	86	82	4	86	11	.....	6	.....
Perry	46	2	4	1	53	48	5	53	48	.....	.....	1
Pickett	19	9	.....	.....	28	28	.....	28	30	1	9	.....
Polk	27	8	3	1	39	35	4	39	10	4	4	2
Putnam	50	5	3	1	59	55	4	59	61	.....	2	.....
Rhea	33	2	5	3	43	35	8	43	34	1	1	.....
Roane	45	15	9	5	74	52	12	64	17	2	3	.....
Robertson	31	8	12	5	56	40	20	60	28	.....	5	.....
Rutherford	56	40	30	10	136	76	37	113	35	3	5	.....
Scott	40	.....	2	.....	42	42	3	45	11	1	.....	.....
Sequatchie	8	2	.....	.....	10	9	.....	9	14	.....	.....	.....
Sevier	66	12	6	.....	84	78	6	84	17	3	.....	1
Shelby	23	58	62	24	167	75	78	153	19	4	8	2
Smith	50	20	16	3	89	65	21	86	24	.....	5	.....
Stewart	39	3	11	1	54	42	12	54	54	.....	.....	.....
Sullivan	51	18	1	6	76	69	7	76	69	.....	.....	.....
Sumner	51	28	11	12	102	71	25	96	30	.....	4	3
Tipton	23	20	24	13	80	43	32	75	19	.....	4	.....
Trousdale	10	5	5	4	24	15	7	22	15	1	1	.....
Unicoi	10	3	.....	.....	13	13	.....	13	12	.....	.....	.....
Union	49	3	2	.....	54	52	2	54	54	.....	.....	1
Van Buren	16	2	.....	2	20	18	2	20	12	.....	1	.....

TABLE III.—*Continued.*

COUNTIES.	NO. OF TEACHERS EM- PLOYED.					NO. OF SCHOOLS AND DISTRICTS.						
	White Male.	White Female.	Colored Male.	Colored Female	Total.	White.	Colored.	Total.	No. of School Districts in Co.	No. of Graded Schools.	No. of Consoli- dated Schools.	No. Schools con- trol'd by City Bds
Warren	54	12	7	9	82	63	16	79	16	.....	4	.....
Washington	47	18	3	5	73	58	10	68	18	4	2	2
Wayne	34	10	2	1	47	44	3	47	14	.....	.....	.....
Weakley.....	74	30	12	4	120	111	29	140	112	4	2	5
White	47	7	4	2	60	54	6	60	57	.....	6	1
Williamson	27	19	15	3	64	51	20	71	25	.....	12	.....
Wilson	75	21	12	14	122	90	29	119	26	3	2	4
TOTAL.....	3787	1623	1026	492	6928	4924	1471	6395	2932	471	230	93

TABLE IV.

Showing Number of Institutes held, etc., Number of First Grade Certificates Issued, Number of Applicants Examined, and Number of Teachers Licensed.

COUNTIES.	No. of Institutes held in County.	No. of Teachers attending.	No. of Days in Continuance.	No. of Schools Visited During the Year.	No. Public Addresses Deliv'd During Year.	No. of First Grade Certificates Issued.	NO. OF APPLICANTS EXAMINED.				NO. OF TEACHERS LICENSED.				
							White Male.	White Female.	Colored Male.	Col'd Female.	Total.	White Male.	White Female.	Colored Male.	Col'd Female.	Total.
Anderson	2	55	3	87	25	54	39	22	14	129	50	30	19	12	111
Bedford	6	25	5	44	43	15	38	11	2	1	52	34	10	2	47
Benton	7	23	2	52	46	12	58	21	10	6	95	25	18	5	49
Bledsoe	4	21	12	33	3	26	31	6	8	5	50	31	6	8	50
Blount	3	33	4	44	44	31	48	12	1	3	64	47	12	1	63
Bradley	3	80	2	101	84	17	58	20	9	79	50	18	9	77	78
Campbell	3	80	2	101	84	17	58	20	21	4	103	50	19	17	88
Cannon	3	31	3	41	28	29	8	8	7	52	29	10	4	2	45
Carter	3	31	3	41	28	20	5	2	50	27	5	6	2	40	40
Cheatham	2	47	9	70	32	24	4	3	2	37	24	8	2	32	37
Chester	2	47	9	70	32	24	4	3	2	37	24	8	2	32	37
Claiborne	2	47	9	70	32	24	4	3	2	37	24	8	2	32	37
Clay	10	30	10	6	61	17	42	17	6	7	72	37	14	4	61
Cocke	10	30	10	6	61	17	42	17	6	7	72	37	14	4	61
Coffee	10	30	10	6	61	17	42	17	6	7	72	37	14	4	61
Crockett	1	33	8	24	19	32	34	13	20	8	74	33	13	18	60
Cumberland	1	33	8	24	19	32	34	13	20	8	74	33	13	18	60
Davidson	12	75	16	129	18	54	40	64	36	40	180	37	57	30	32
Decatur	3	30	2	8	3	20	35	10	6	3	54	35	10	6	3
DeKalb	5	50	1	75	75	50	65	20	15	10	110	60	11	8	82
Dickson	5	15	2	60	7	9	25	20	15	9	69	23	14	10	6
Dyer	3	70	4	52	64	26	36	70	22	154	24	36	54	14	128
Fayette	1	26	2	34	38	30	34	5	39	39	34	5	39	39	39
Fentress	5	142	2	68	73	13	40	16	21	11	88	38	16	17	9
Franklin	5	142	2	68	73	13	40	16	21	11	88	38	16	17	9
Gibson	5	142	2	68	73	13	40	16	21	11	88	38	16	17	9
Giles	5	142	2	68	73	13	40	16	21	11	88	38	16	17	9
Grainger	5	142	2	68	73	13	40	16	21	11	88	38	16	17	9
Greene	2	82	12	85	45	90	21	15	4	130	88	21	15	4	128
Grundy	2	35	15	30	16	30	16	10	9	65	30	16	10	9	65
Hamblen	21	57	19	52	21	31	47	35	19	22	123	45	32	16	14
Hamilton	1	22	2	23	20	44	4	1	2	49	38	5	1	107	107
Hancock	1	22	2	23	20	44	4	1	2	49	38	5	1	107	107
Hardeman	3	20	2	95	65	75	20	5	6	106	71	17	5	5	96
Hardin	1	45	10	12	10	25	27	22	45	25	119	26	20	40	23
Hawkins	1	45	10	12	10	25	27	22	45	25	119	26	20	40	23
Haywood	1	45	10	12	10	25	27	22	45	25	119	26	20	40	23
Henderson	1	45	10	12	10	25	27	22	45	25	119	26	20	40	23
Henry	1	45	10	12	10	25	27	22	45	25	119	26	20	40	23
Hickman	1	45	10	12	10	25	27	22	45	25	119	26	20	40	23
Houston	4	12	2	2	10	30	7	9	1	47	30	7	9	1	47
Humphreys	4	12	2	2	10	30	7	9	1	47	30	7	9	1	47
Jackson	3	17	5	21	12	18	21	6	3	30	17	5	2	24	24
James	6	27	18	56	34	29	59	15	22	9	105	49	14	16	6
Jefferson	1	20	2	28	18	27	32	2	34	32	34	2	2	2	85
Johnson	6	106	2	108	70	90	33	18	7	148	80	30	15	5	130
Knox	1	7	1	13	5	6	4	1	2	13	6	4	1	2	13
Lake	1	7	1	13	5	6	4	1	2	13	6	4	1	2	13
Lauderdale	2	25	4	46	5	33	24	19	28	9	10	18	15	23	6
Lawrence	2	17	2	61	55	18	63	19	8	1	91	57	16	5	79
Lewis	1	7	1	13	5	6	4	1	2	13	6	4	1	2	13
Lincoln	8	126	2	107	70	101	111	103	30	17	261	107	93	23	9
Loudon	11	48	25	30	11	28	29	13	6	5	53	29	13	6	5
Macon	11	48	25	30	11	28	29	13	6	5	53	29	13	6	5
Madison	11	48	25	30	11	28	29	13	6	5	53	29	13	6	5

TABLE IV.—Continued.

COUNTIES.	No of Institutes held in County.	No. of Teachers at- tending.	No. of Days in Con- tinuance.	No. of Schools Visited During the Year.	No. Public Addresses Deliv'd During Year.	No of First Grade Certificates Issued	NO. OF APPLICANTS EXAMINED.					NO. OF TEACHERS LICENSED.				
							White Male.	White Female.	Colored Male.	Col'd Female.	Total.	White Male.	White Female.	Colored Male.	Col'd Female.	Total.
Marion	1	6	1	20		14	30	9	5	1	45	30	9	5	1	45
Marshall	1	175	30	71	67		54	67	23	19	163	46	53	18	14	131
Maury	3	25	2	40		51	36	24	37	18	115	33	24	34	14	107
McMinn	3	60	6	45	35		40	23	12	4	79	40	23	12	4	79
McNairy	4	6	8	64	43	25	62	18	17	9	106	56	14	15	5	90
Meigs	4	13	9		5	18	24	2	7	3	36	24	2	5	3	34
Monroe				49	52	35	104	29	17	8	158	43	14	7	1	65
Montgomery	8	50	8	71	58	26	27	45	26	18	116	26	45	25	15	111
Moore	3	10	1	15		8	11	13	2		28	11	13	1	2	27
Morgan						21	29	6			35	29	6			35
Obion				39		79	87	14	10	7	118	76	15	9	6	106
Overton	4	113	8	47	35		41	49	2	5	97					
Perry	3	15	2	40	3	10	48	2	6	2	57	46	2	4	1	53
Pickett	1	27	4	25	56	17	19	9			28					
Polk						6	27	8	3	1	39	27	8	3	1	39
Punnam				20	8	28	54	8	4	2	68	52	8	5	2	67
Rhea				3		20	34	2	7	4	47	33	2	5	3	43
Roane	1	56	10	60	40	3	45	15	10	6	76	45	15	9	5	74
Robertson	2	60	22	15		30	31	8	12	5	56	31	8	12	5	56
Rutherford	10	15	1	50		51	47	42	37	12	138	56	40	30	10	136
Scott				36	31	10	37	1	2		40	37				37
Sequatchie				9	9	2	11	1			12	9	1			10
Sevier	8	50	27	70	40	23	95	13	7		115	68	12	6		86
Shelby	15	145	28	150	2	88	24	69	82	40	215	29	58	57	15	150
Smith							50	20	16	3	89	50	20	16	3	89
Stewart	5	15	1	18	1	17	42	3	15	1	61	40	3	12	1	56
Sullivan				69	69	41	51	18	3	6	78	51	18	1	6	76
Sumner	3	38	32	87	16	55	121				121	51	29	11	12	102
Tipton	4	42	6	15	3	40	23	20	32	18	93	23	20	24	13	80
Trousdale				24	17	3	12	5	5	6	28	10	5	5	4	24
Unicoi	1	8	1	12	6	1	12	3			15	10	3			13
Union	3	40	12	54	48	24	49	3	2		54	49	3	2		54
Van Buren				2	8	1	16	2		2	20	16	2		2	20
Warren	5			47		37	57	12	10	14	93	54	12	7	9	82
Washington	2	24	2	33	28	37	35	19	1		55	35	19	1		55
Wayne						14	43	20	10		73	39	19	6		64
Weakley	1	60	20	25	10	45	75	38	20	4	137	75	38	19	4	136
White	4	40	1	58	20	23	64	8	4	2	78	61	8	4	2	75
Williamson							44	25	24	7	100	27	20	13	2	62
Wilson	7	36	1	36	13	70	77	21	15	17	130	72	21	12	14	119
TOTAL	251	2622	423	3888	1856	2439	3987	1663	1200	619	7469	3553	1506	975	470	6504

TABLE V.—Showing the Number of Pupils Enrolled, Average Daily Attendance, and Number of Pupils in each Branch of Study.

COUNTIES.	No. of Pupils Enrolled During the Year.				Average Daily Attendance.			No. of Pupils Enrolled in Each Branch of Study.									
	White Male.	White Female.	Colored Male.	Col'd Female.	Total.	White.	Colored.	Total.	In Orthogra-phy.	In Reading.	In Writing.	In Arithmetic.	In English Grammar.	In Geography.	In U. States History.	In Elements of Geol'y Tenn.	In Elements of Prim. Agr.
Anderson	3000	2550	1000	950	7500	3300	1170	4470	6000	6500	6500	4800	1780	2160	760	30	.....
Bedford	1202	1170	94	88	2554	1750	120	1870	2554	2182	1900	1650	1630	1440	1300	10	.....
Benton	701	700	100	99	1600	1058	150	1208	1570	1145	705	669	240	217	81	.....	.....
Bledsoe	2507	2500	224	200	5431	.....	.....	.....	3028	2941	2383	2805	2526	2179	1113	842	6
Blount	1570	1550	103	107	3330	1560	105	1665	3013	1565	111	485	196	182	54	.....	.....
Bradley	1666	1664	66	50	3446	2193	84	2277	3200	3100	600	1000	300	185	50	.....	.....
Cannon	1685	1596	151	149	3581	.....	.....	.....	5137	4740	2174	2809	911	560	717	47	33
Carroll	2227	2177	606	625	5635	2982	930	3912	1280	870	385	298	140	375	75	.....	.....
Carter	1495	1493	110	100	3198	2397	159	2556	1236	1236	1323	1857	563	1119	573	29	.....
Cheatham	986	922	253	234	2345	1697	411	2108	1843	1401	564	596	234	85	81	.....	.....
Chester	921	654	554	347	2476	1417	819	2236	4380	1780	670	640	431	470	70	.....	.....
Claiborne	2470	2112	100	98	4780	.....	.....	.....	1601	787	241	733	322	137	143	.....	.....
Clay	879	941	29	31	1880	1203	33	1236	3790	2494	1024	861	482	49	101	2	1
Coke	1878	1778	202	200	4058	.....	.....	.....	3121	2462	2242	1250	670	809	397	.....	.....
Coffee	1466	1609	237	268	3580	2227	397	2624	1238	936	660	596	226	204	96	.....	.....
Crockett	476	476	187	186	1325	.....	.....	.....	1455	1365	1180	1580	1040	956	632	49	105
Cumberland	1002	900	.....	.....	1902	.....	.....	.....	13842	12978	14026	8320	7006	7956	2247	176	36
Davidson	4785	4627	2645	2363	14420	7844	3627	11471	1400	900	700	500	200	260	80	.....	.....
Decatur	875	775	175	125	1950	.....	.....	.....	5106	4875	2785	2785	2785	2673	2673	.....	.....
DeKalb	2376	2355	190	185	5106	4357	395	4752	2885	2325	1728	1627	822	752	643	.....	.....
Dickson	1485	1678	204	216	3583	2532	393	2925	2885	2325	1728	1627	822	752	643	.....	.....

Dyer.....	1705	1608	450	437	4200	1976	673	2649	3670	3465	2674	4150	1614	1576	976	.....	.....
Fayette	599	506	1419	1381	3905	702	2171	2873	3282	2547	1706	1437	672	725	238	.....	.....
Fentress	418	300	341	306	1354	632	640	1232	1354	809	821	511	416	413	206	60	13
Franklin	1659	1603	428	396	3986	2371	513	2884	2361	1954	1372	2046	1803	1040	923	.....	.....
Gibson	3360	2953	1158	1067	8738	4493	1320	5813	8124	7433	7321	6428	2126	1992	637	.....	.....
Giles	2306	2329	1390	1410	7435	3992	2424	6416	.....	.....	.....	.....	.....	.....	.....	.....	.....
Grainger	1945	1830	121	96	3992	1985	145	2130	3375	2562	1213	1714	1217	1316	262	4	.....
Greene	3138	2800	271	257	6466	3312	323	3635	6109	4533	2360	2564	1148	1129	604	13	16
Grundy	805	795	32	16	1648	.....	.....	.....	1065	989	875	1350	785	750	379	47	4
Hambien	1220	1082	256	245	2803	1382	378	1760	2615	1800	780	650	683	590	232	75	45
Hamilton	2207	2007	831	977	6022	2392	1073	3465	5647	5072	4130	4242	856	1743	256	.....	.....
Hancock	1231	1096	23	18	2368	1750	29	1779	1975	1356	462	483	395	372	346	.....	.....
Hardeman .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Hardin	2203	2050	341	326	4920	3946	427	4373	2563	1421	803	1014	658	738	112	3	.....
Hawkins	2465	1930	290	232	4917	3275	390	3665	4436	2566	1253	1367	588	665	132	16	.....
Haywood	675	700	1477	1515	4367	945	2494	3439	3300	2740	2200	1700	893	1224	444	.....	.....
Henderson .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Henry	2037	1943	1011	921	5912	3119	1421	4540	5728	4873	4787	3891	2434	1982	1417	149	.....
Hickman .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Houston	395	485	90	78	1048	730	168	898	975	895	740	480	562	232	190	.....	.....
Humphreys	1374	1432	146	155	3107	2428	289	2717	2956	2751	2635	1742	987	793	436	72	5
Jackson .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
James	620	550	85	65	1320	929	112	1041	1026	1275	1100	550	265	152	120	60	12
Jefferson	2340	2340	452	451	5583	.....	.....	.....	5583	4980	2676	920	654	793	408	92	12
Johnson	820	800	60	40	1720	1203	50	1253	1720	1000	800	850	700	500	100	.....	.....
Knox	3380	3994	617	624	9115	6624	926	7550	.....	9115	9115	9115	7420	9115	200	200	200
Lake	395	371	65	79	910	176	60	236	830	653	539	403	104	117	43	.....	.....
Lauderdale	822	823	855	846	3346	.....	.....	.....	1623	1153	804	679	261	341	52	.....	.....
Lawrence	1286	957	71	71	2385	1683	120	1803	2347	1545	1002	955	324	308	141	.....	.....
Lewis	125	160	25	15	325	240	30	270	140	252	260	102	71	34	25	.....	16
Lincoln	2668	2191	816	769	6444	3054	1013	4067	6144	5593	4930	4000	1579	1659	484	13	8
Loudon	1023	856	184	182	2245	1299	269	1568	2150	1590	1221	968	385	343	79	14	.....
Macon	1273	1069	84	70	2496	1408	87	1495	2308	1446	842	787	319	352	142	.....	.....
Madison	1451	1431	1512	1482	5874	2111	2061	4172	4160	4022	3716	3651	1272	1297	900	.....	.....
Marion	1150	1025	100	75	2350	.....	.....	.....	1900	1575	550	800	475	400	95	.....	.....
Marshall	2321	2195	711	622	5849	3923	1237	5160	5251	5011	5251	4722	3069	3941	2520	201	75
Maury	1636	1546	1489	1528	6199	2593	2427	5020	5424	4886	3490	3071	1396	1396	695	25	.....

TABLE V.—Continued.

COUNTIES.	No. of Pupils Enrolled During the Year.				Average Daily Attendance.		No. of Pupils Enrolled in Each Branch of Study.										
	White Male.	White Female.	Colored Male.	Cold Female.	Total.	White.	Colored.	Total.	In Orthogra- phy.	In Reading.	In Writing.	In Arithmetic.	In English Grammar.	In Geography.	In U. States History.	In Elements (Geol'y Tenn.	In Elements of Prin. Agr.
McMinn	1896	1720	229	241	4086	2812	364	3176	2490	2842	1081	948	684	576	116	10	.....
McNairy	811	760	109	134	1814	1220	209	1429	560	1120	730	809	420	371	28	.....	.....
Meigs	2016	2330	114	110	4570	2740	190	2930	3809	2704	1004	1112	731	514	492	.....	.....
Monroe	1270	1341	1137	1291	5039	1926	1787	3713	4812	3692	2900	3117	1302	2181	621	61	.....
Montgomery	875	750	75	80	1780	750	50	800	1610	1400	1350	920	475	325	250	50	.....
Moore	831	815	.....	.....	1646	912	.....	912	1448	1030	423	459	154	158	46	.....	.....
Morgan	3003	3042	417	432	6894	4913	717	5630	6420	6690	4613	4219	3711	3339	3716	.....	.....
Obion	1780	1620	47	39	3486	2114	65	2179	2750	1615	689	750	471	131	83	9	.....
Overton	1310	1280	60	70	2720	.....	.....	.....	2408	1972	1118	600	300	310	200	.....	.....
Perry	525	460	13	9	1007	472	.....	472	975	304	133	232	116	40	27	9	6
Pickett	875	880	52	62	1869	1243	47	1290	1869	1000	560	550	300	240	90	23	17
Polk	1805	1421	82	78	3386	1130	190	1320	2560	1300	620	20	580	300	130	92	.....
Putnam	1002	1202	140	160	2304	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Rhea	1804	1475	280	235	3794	2224	380	2604	3790	2600	1720	1501	549	650	150	33	2
Roane	1176	717	270	220	2383	1605	336	1941	2116	1883	1454	1179	363	212	235	3	.....
Robertson	2202	1860	1734	1876	7662	898	685	1583	5467	4845	2310	1736	1312	1247	896	.....	.....
Rutherford	966	696	91	38	1741	1329	45	1374	1059	840	450	640	518	464	347	33	.....
Scott	216	212	.....	.....	428	365	.....	365	420	307	114	118	19	9	5	.....	.....
Sequatchie	2295	2050	40	43	4428	2760	65	2825	3850	3975	3050	1575	1400	1425	1075	200	50
Searver	2915	2981	4288	4330	14514	.....	.....	.....	10288	10288	9827	8754	6527	4221	3225	20	8
Shelby	1900	1700	450	450	4500	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Smith	1221	1114	198	186	2719	1535	275	1810	2625	2400	1500	1400	800	650	200	20	.....
Stewart .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

Sullivan	1811	1671	60	55	3597	2203	86	2289	2932	2469	1844	1848	637	657	179	51	.....
Sumner.....	2001	1771	668	675	5115	2829	999	3823	5115	3701	2856	2377	887	984	456	.....	.....
Tipton.....	1050	1200	877	975	4102	1350	987	2337	3897	3560	3848	2324	1575	1050	675	.....	.....
Trousdale....	364	342	174	285	1115	470	742	1212	1115	713	615	458	186	194	74	.....	.....
Unicoi	670	413	.....	.....	1083	574	.....	574	712	103	71	132	81	109	53	.....	.....
Union	1510	1760	20	15	3305	2000	25	2025	3200	2450	1240	700	200	150	40	10	.....
Van Buren .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Warren.....	1737	1720	264	251	3972	3020	320	3340	3128	2980	1740	2150	1235	494	370	20	.....
Washington..	2112	1763	188	182	4235	2656	227	2883	2802	2513	1904	1722	1019	713	225	49	.....
Wayne.....	1232	952	99	105	2388	1216	108	1324	2031	1600	709	586	256	268	116	.....	.....
Weakley.....	3100	3300	500	420	7320	4800	552	5352	7320	6400	7000	3940	2560	1700	1660	70	100
White.....	1646	1210	138	101	2995	1664	179	2243	2965	1981	831	1179	529	348	94	.....	.....
Williamson..	1509	1800	1000	1220	5529	2266	1110	3376	4780	.....	.....	.....	.....	.....	.....	.....	.....
Wilson	1984	1939	678	735	5336	3380	1750	5130	4780	3719	4560	4201	1256	1010	570	270	.....
TOTAL.....	140719	132131	38873	38420	350143	160966	44513	205479	269518	233430	100123	155449	89518	86214	42184	3262	773

3—School.

TABLE VI.

*Showing Amount of School Money Received during the year 1883-84,
and the Balance on hand July 1, 1884.*

COUNTIES.	RECEIPTS.				
	Amount on Hand July 1st, 1883.	From State.	From County.	From all Other Sources.	Total Amount Received.
Anderson.....					
Bedford.....	\$9350 97	\$2378 43	\$18198 05	\$273 21	\$30200 66
Benton.....	228 80	575 40	2387 83	280 68	3472 26
Bledsoe.....	505 55	532 15	2757 51	80 15	3875 36
Blount.....	7320 39	1472 67	7026 85	642 45	16462 36
Bradley.....	3272 96	1197 48	5472 97	15 00	9958 41
Campbell.....		1095 90	4479 14	649 81	6224 85
Cannon.....					
Carroll.....	3395 43	1978 85	9835 65		15209 93
Carter.....		1104 98	3844 14	414 03	5363 15
Cheatham.....		698 96	5689 66		6388 62
Chester.....	2669 43	362 45	3574 94	310 45	6917 27
Claiborne.....		1265 93	597 25		1863 18
Clay.....		620 76	2176 00		2796 76
Cocke.....		1391 80	2431 30		3823 10
Coffee.....	5000 00	1317 00	5677 00	200 00	7693 00
Crockett.....	1954 94	1231 15	7271 45		10457 54
Cumberland.....	300 00	547 45	1100 00		1947 45
Davidson.....	10587 91	7138 00	78082 24	52437 57	148245 72
Decatur.....					
DeKalb.....	221 20	1468 16	6400 62		8089 98
Dickson.....		1153 33	4633 47		5786 80
Dyer.....	3100 00	1594 02	14894 99		19589 01
Fayette.....	6944 83	2382 24	9581 57		18908 64
Fentress.....					
Franklin.....	4809 40	1542 70	7745 10		14097 20
Gibson.....		3253 18	27972 94	604 28	31880 40
Giles.....	11912 28	3400 32	20453 56		35766 16
Grainger.....	900 00	1156 96	4089 00	140 00	6285 96
Greene.....	5351 32	7746 82	7749 26	477 49	21324 89
Grundy.....	3631 63	574 75	6296 74		10503 12
Hamblen.....	648 32	973 45	4458 23		6080 00
Hamilton.....	12210 91	2112 67	18503 69	21156 65	53983 92
Hancock.....	486 01	900 48	1623 25	142 10	3151 84
Hardeman.....	2476 13	2117 62	11825 05	419 07	16837 87
Hardin.....	1986 17	1473 93	4439 23	50 00	7949 33
Hawkins.....					
Haywood.....	5318 00	2290 14	3700 00	715 00	12023 14
Henderson.....	428 39	1570 00	7759 00		9757 39
Henry.....	8855 94	2034 12	8880 73	1217 35	20988 14
Hickman.....	2500 64	1162 82	4088 14		7751 60
Houston.....	784 63	364 60	4584 34		5733 57
Humphreys.....	1369 07	1062 83	4014 50		6446 40
Jackson.....					
James.....	510 00	452 05	2577 74	187 82	3727 61
Jefferson.....		1600 00	10183 88	760 00	12543 88
Johnson.....		761 25	3806 25		4567 50
Knox.....					

TABLE VI.—Continued.

COUNTIES.	RECEIPTS.				
	Amount on Hand July 1st, 1884.	From State.	From County.	From all Other Sources.	Total Amount Received.
Lake	\$2190 61	\$325 05	\$2240 47	\$100 80	\$4856 93
Lauderdale	5087 28	1403 68	5800 00	487 40	12778 36
Lawrence	32 31	1382 12	3579 73	207 66	5201 82
Lewis		213 89	952 16	63 61	1229 66
Lincoln	3701 97	2513 02	21259 48	1235 35	28703 82
Loudon	4153 20	775 29	4122 62	165 00	9216 11
Macon	1233 26	890 49	4798 85		6922 60
Madison	6206 59	7642 42	6265 05	4856 07	24970 17
Marion	3000 00	1007 22	5364 22		9371 44
Marshall	1421 75	1699 75	11180 65	477 84	14779 99
Maury	8736 56	3757 69	15325 37	714 49	28534 11
McMinn					
McNairy	6401 50	1616 97	8959 00	1260 65	18238 12
Meigs		1920 00			1920 00
Monroe	1776 64	1344 10	5819 94	2203 39	11144 07
Montgomery	14705 97	2474 75	17790 05	107 35	35078 12
Moore	261 68	590 30	2534 59	126 76	3513 33
Morgan	200 00	524 18	3214 96	2359 09	6298 23
Obion		2295 74	18687 17		20981 91
Overton		1111 26	2098 72		3209 98
Perry	2366 88	357 93	4144 45		6869 26
Pickett	1447 99	401 00	1287 80		3136 79
Polk	1025 59	652 94	2585 97	33 45	4297 95
Putnam	87 60	1173 92	3581 19	101 50	4944 21
Rhea	1589 52	787 25	4589 49		6966 26
Roane	4868 25	1464 72	8713 23		15046 20
Robertson	3571 72	1652 95	6573 45		11798 12
Rutherford	6872 83	3385 34	16300 00	5018 95	31577 12
Scott	2683 11	354 57	6240 90		9278 58
Sequatchie		497 40	490 12	39 65	1027 17
Sevier	2500 00	1597 14	6316 57	883 63	11297 34
Shelby	15770 65	7278 59	54798 65		77847 89
Smith	7757 50	1599 93	3383 12	76 65	12817 20
Stewart	6314 45	1215 93	7853 21		15383 69
Sullivan	658 05	1731 23	8213 31	451 75	11054 84
Sumner	4534 37	2119 14	13992 84		20646 35
Tipton	674 80	2006 91	13253 18	250 00	16184 89
Trousdale	562 40	578 06	2093 42	54 87	3288 75
Unicoi	699 69	355 98	286 00		1341 67
Union	800 00	1034 49	2500 00	100 00	4434 49
VanBuren	220 69	278 60	601 00	15 00	1115 29
Warren	6521 00	1312 00	5155 00	997 00	13985 00
Washington	1987 37	1588 86	6744 99	754 00	11075 22
Wayne	3232 09	1023 54	2059 00	538 66	6853 29
Weakley	10000 00	2415 04	11263 27	1762 63	25440 94
White	1093 44	968 25	2318 14	120 17	4500 00
Williamson	658 31	2686 00	10300 00	900 58	14544 89
Wilson	11749 98	2409 64	7460 38		21620 00
Total	\$291061 29	\$147863 93	\$744850 60	\$108387 06	\$1292162 88

TABLE VII.—*Showing Expenditures for County Superintendents' Salaries, Teachers' Salaries, School Sites, Buildings and Repairs, Furniture, Fixtures, Libraries and Apparatus, District Clerks and others for Enumeration of Scholastic Population, Total Amount Expended, and Balance on Hand.*

COUNTIES.	Salaries of Teachers.	School Sites, Buildings, and Repairs.	Furniture, Fixtures, Libraries & Apparatus.	Paid Co. Superintendent.	Paid District Clerks.	All other Expenses.	Total Amount Expended.	Balance on Hand June 30, 1884.
Anderson	\$ 17674 53	\$ 2061 93	.....	\$ 600 00	\$ 170 67	\$ 741 42	\$ 21248 55	\$ 8952 11
Bedford	2526 92	107 60	.....	103 00	38 57	414 45	3190 56	281 70
Benton	3053 70	.....	.....	100 00	.....	187 75	3341 45	533 91
Bletsoe	8137 81	593 89	35 50	112 50	107 14	109 68	9156 52	7305 84
Blount	6269 79	552 95	.....	.....	42 34	.....	6865 08	3093 33
Bradley	5472 81	276 33	.....	300 00	87 74	.....	6136 88	87 97
Campbell .....	.....	.....	.....	.....	.....	.....	.....	.....
Cannon	8370 35	.....	.....	250 00	157 58	.....	8777 93	6432 00
Carroll	4680 72	500 25	.....	100 00	82 18	.....	5363 15	.....
Carter	6090 46	1 85	21 15	60 00	79 66	135 50	6388 62	.....
Chenham	1944 16	620 00	.....	100 00	24 61	.....	2688 77	4228 50
Chester	1755 00	.....	.....	2 00	106 18	.....	1863 18	.....
Claiborne	2676 00	.....	.....	70 00	51 76	.....	2796 76	.....
Clay	1710 00	.....	.....	100 00	108 38	.....	1918 38	1904 72
Cocke	7000 00	50 00	.....	200 00	.....	.....	7250 00	443 00
Coffee	5716 58	936 29	57 65	350 00	80 24	269 62	7410 38	3017 16
Crockett	1332 45	300 00	100 00	100 00	45 00	10 00	1887 45	60 00
Cumberland	101900 37	25088 82	1468 72	*3600 00	331 07	2036 10	134425 08	13820 64
Davidson .....	.....	.....	.....	.....	.....	.....	.....	.....
Decatur	7138 55	400 00	.....	200 00	125 00	.....	7863 53	226 43
DeKalb	5374 80	223 68	.....	100 00	88 32	.....	5786 80	.....
Dickson	6837 44	1043 92	339 08	300 00	20 85	356 65	8897 94	10891 07
Dyer .....	.....	.....	.....	.....	.....	.....	.....	.....

	7086 25	5 00	224 50	300 00	225 14	89 85	7880 74	10877 80
Fayette								
Fentress								
Franklin	6403 20	480 00	56 00	250 00	108 00		7207 20	6800 00
Gibson	19977 23	1491 87	546 35	600 00	251 77	932 82	23 00 04	8030 36
Giles	22423 50			500 00	268 76		23192 26	12573 90
Granger	4020 00	1100 00	57 00		203 00		5385 00	900 96
Greene	16797 48	1677 36		250 00	179 20	114 84	19018 88	2306 01
Grundy	3647 52	501 85	584 65	75 00	46 32		4855 34	5647 78
Hamblen	4872 00	390 00	100 00	190 00	100 00	428 00	6080 00	
Hamilton	33959 01	3061 50	2194 43	500 00	85 00	4926 89	44727 43	9256 49
Hancock	2477 23	3 66	3 25	00 00	51 80	37 38	2683 32	518 52
Hardeman	9638 09	1378 82	136 05	200 00	116 18	369 07	11888 21	4999 66
Hardin	3019 75	10 14		150 00	157 43		3337 32	4612 01
Hawkins								
Haywood	5006 69			300 00	256 08	11 50	5574 27	6448 87
Henderson	7674 00			195 00	105 00	1737 92	9711 02	45 47
Henry	9034 45	1135 59	106 35	250 00	131 00		10737 89	10250 75
Hickman	5408 00	26 00		225 00	84 20		5743 20	2008 40
Houston	5000 00			100 00	31 52	40 00	5171 52	562 05
Humphreys	3549 00	264 35			58 03	10 00	3881 43	2564 97
Jackson								
James	3324 20	224 45	45 00	100 00	33 96		3727 61	
Jefferson	9964 80	276 30	45 00	2 00	56 05		10542 75	2001 13
Johnson	3807 50		700 00		60 00		4567 50	
Knox	27576 86	551 13	864 60	750 00	198 81	986 17	36227 57	15882 67
Lake	2445 55	1045 48		104 00	24 09	118 50	3738 22	1118 71
Lauriedale	7849 27	305 83		280 00	110 68		8545 78	4232 58
Lawrence	3692 11			50 00	60 00	80 71	3883 82	1313 00
Lewis	294 67	55 80		50 00	15 80		416 27	813 39
Lincoln	17501 63	1449 07	738 45	450 00	196 53	142 34	20508 02	8141 80
Loudon	5026 82	645 75	14 50	100 00	47 50	142 38	5976 95	3239 16
Macon	5411 16	623 88		150 00	82 79		6197 83	724 77
Madison	12692 62	352 75		208 30		147 82	13401 49	11568 68
Marion	5964 22	100 00		200 00	100 00		6364 22	3007 22
Marshall	10215 00	2118 75	216 16	350 00	110 00	41 51	13051 42	1728 57
Maury	17122 12	653 62		275 00	182 27		18233 01	10301 10
McMinn								

TABLE VII.—Continued.

COUNTIES.	Salaries of Teachers.	School Sites, Buildings, and Repairs.	Furniture, Fixtures, Libraries & Apparatus.	Paid Co. Superintendents.	Paid District Clerks.	All other Expenses.	Total Amount Expended.	Balance on Hand June 30, 1884.
McNairy	8285 50	424 15	362 15	250 00	120 50	.....	9442 30	8795 82
Meigs	1920 00	.....	.....	.....	.....	.....	1920 00	.....
Monroe	6641 05	856 87	69 25	100 00	103 62	274 42	8045 21	3098 86
Montgomery	20007 20	.....	.....	150 00	.....	351 84	20509 04	14569 08
Moore	2964 89	48 36	5 15	65 00	44 84	13 40	3141 64	371 89
Morgan	5179 95	369 05	27 00	164 00	38 44	.....	5778 44	519 79
Obion	16812 00	695 00	122 00	475 00	131 00	.....	18235 00	2747 91
Overton	3012 00	.....	.....	100 00	71 36	.....	3183 36	26 62
Perry	1348 50	71 07	.....	250 00	6 36	20 05	1695 98	5173 28
Pickett	1261 85	125 00	.....	.....	30 00	.....	1416 85	1719 94
Polk	3498 45	75 62	.....	50 00	40 44	173 25	3837 76	460 19
Putnam	4700 00	.....	.....	128 00	90 00	.....	4918 00	26 21
Rhea	6966 26	.....	.....	.....	.....	.....	6966 26	.....
Roane	6454 36	666 81	135 55	.....	67 77	630 61	7955 10	7091 10
Robertson	7885 24	.....	.....	200 00	126 56	.....	8211 80	3586 32
Rutherford	19038 51	1898 86	146 20	300 00	292 04	756 85	22432 46	9144 66
Scott	3015 27	.....	.....	150 00	.....	.....	3165 27	6113 31
Sequatchie	708 83	.....	.....	50 00	7 93	.....	766 76	260 41
Sevier	8002 77	567 65	235 00	200 00	105 80	136 12	9247 34	2050 00
Shelby	59893 12	2052 26	520 18	600 00	501 76	1246 97	64814 29	13033 60
Smith	3968 65	977 25	68 90	.....	122 70	118 80	5256 30	7560 90
Stewart	7541 54	630 76	.....	250 00	84 87	164 89	8662 06	6721 63
Sullivan	7952 43	200 00	80 00	300 00	130 00	15 00	8677 43	2376 91
Sumner	13411 95	225 58	.....	300 00	156 52	174 80	14268 35	6378 00
Tipton	14343 69	1451 88	221 20	.....	79 92	88 20	16184 89	.....
Trousdale	2559 06	142 95	.....	100 00	7 50	.....	2809 51	479 21
Union	540 33	.....	.....	75 00	27 14	.....	642 47	699 20
Union	3300 00	200 00	.....	125 00	80 00	.....	3705 00	729 49

Van Buren.....	838 70	.....	30 00	15 00	26 13	.....	909 83	205 46
Warren	9080 00	200 00	15 00	.....	106 10	.....	9381 10	4603 90
Washington	8910 87	295 50	80 00	200 00	146 50	108 29	9741 16	1334 06
Wayne	3312 49	62 35	.....	.....	72 47	.....	3447 31	8405 98
Weakley	14426 44	500 00	595 00	800 00	243 00	.....	16564 44	8876 50
White	3974 49	18 75	.....	75 00	71 27	.....	4139 51	360 49
Williamson	11610 73	1100 00	150 00	300 00	196 92	800 00	14157 65	387 24
Wilson	20550 00	500 00	.....	300 00	270 00	.....	21620 00	.....
TOTAL.....	\$822561 11	\$72242 18	\$11576 97	\$20232 40	\$9109 31	\$19747 86	\$955469 83	\$336693 05

*County and City Superintendent.

TABLE VIII.

Showing the Number and Character of School-houses, School houses Erected during the Year, Estimated Value of School houses, including Sites, Grounds, Desks, Seats, etc., School Apparatus, viz.: Globes, Maps, Charts, Blackboards, etc.

COUNTIES.	No. and Character of School Houses.				School Ho's Erected during the Year.			Estimated Value of School Houses, including Sites, Grounds, Desks, Seats, etc.	Estimated Value of School Apparatus, viz.: Globes, Maps, Charts, Blackboards, etc.	Value of School Houses Erected during Year.	Total Estimated Value of School Property.
	Stone or Brick.	Frame.	Log.	Total.	Stone or Brick.	Frame.	Log.				
Anderson	2	59	32	93	4	..	4	\$17,000 00	\$500 00	\$3,000 00	\$20,500 00
Bedford	1	4	21	26	1	..	1	2,364 00	..	..	2,364 00
Ben on	3	9	30	42	1	..	1	10,500 00	100 00	30 00	10,630 00
Bledsoe	3	50	17	70	2	..	2	7,800 00	50 00	75 00	8,600 00
Blount .....	..	26	23	49	2	..	2	7,300 00	25 00	300 00	7,625 00
Bradley	3	13	27	43	1	2	3	19,000 00	250 00	500 00	19,750 00
Campbell .....	..	24	61	75	1	3	4	..	..	..	..
Cannon .....	..	43	63	96	7	..	7	16,300 00	1,325 00	520 00	18,145 00
Carroll	3	23	15	41	3	2	5	2,300 00	600 00	800 00	3,700 00
Carter .....	..	22	5	27	..	..	..	2,175 00	31 85	..	2,206 85
Cheatham .....	..	30	15	45	2	3	5	..	..	..	..
Chester	1	8	69	78	1	1	2	1,760 00	..	28 00	1,788 00
Claiborne	1	9	24	33	1	1	1	4,500 00	150 00	200 00	4,850 00
Clay	1	31	44	76	1	1	2	..	..	..	..
Coke .....	..	25	20	45	..	..	..	4,500 00	440 00	..	4,940 00
Coffee	1	38	5	44	2	..	2	9,205 00	145 00	500 00	9,850 00
Crockett	1	8	54	63	..	1	1	..	..	..	..
Cumberland	23	63	7	93	4	9	14	288,393 00	1,800 00	40,000 00	328,193 00
Davidson .....	..	12	35	47	..	2	5	3,250 00	50 00	..	3,300 00
Decatur	1	30	44	75	3	2	3	1,987 54	100 00	500 00	2,587 54
DeKalb	1	12	22	35	3	1	3	4,000 00	..	232 68	4,232 68
Dickson	2	35	13	50	1	2	3	28,000 00	300 00	350 00	28,650 00
Dyer .....	..	11	9	20	2	1	3	2,360 00	15 00	..	2,375 00
Fayette .....	..	8	30	38	2	3	5	5,000 00	50 00	2,000 00	7,050 00
Fentress	1	26	31	58	..	..	..	..	..	..	..
Franklin	5	93	11	109	3	..	3	47,010 00	1,122 50	4,200 00	48,552 50
Gibson .....	..	52	27	79	1	..	1	16,275 00	730 00	..	17,005 00
Giles .....	..	30	5	35	2	..	2	5,350 00	150 00	75 00	5,775 00
Granger	1	65	41	107	5	..	5	21,000 00	500 00	2,000 00	23,500 00
Greene .....	..	10	19	29	1	..	1	..	..	..	..
Grundy	1	22	16	39	1	..	1	10,835 00	200 00	100 00	11,135 00
Hamblen	1	31	2	36	2	..	2	81,830 00	453 00	1,800 00	84,083 00
Hamilton	3	4	15	19	..	1	1	2,300 00	100 00	300 00	2,700 00
Hancock	1	67	38	106	5	1	6	8,460 00	945 00	2,025 00	11,430 00
Hardeman	1	16	20	37	5	4	9	3,000 00	1,100 00	600 00	4,700 00
Hardin .....	..	25	74	99	2	1	3	12,000 00	500 00	550 00	13,050 00
Hawkins .....	..	14	3	17	..	..	..	2,000 00	200 00	..	2,200 00
Haywood .....	..	..	..	..	..	..	..	..	..	..	..
Henderson	1	35	39	75	4	..	4	10,075 50	249 30	600 00	10,924 80
Henry	13	18	31	..	..	..	..	4,081 00	300 00	..	4,381 00
Hickman .....	..	14	38	52	1	1	..	4,520 35	75 90	150 20	4,746 45
Houston .....	..	..	..	..	..	..	..	..	..	..	..
Humphreys	1	9	2	12	1	..	1	2,824 00	205 00	184 00	3,213 00
Jackson	4	39	9	52	12	3	15	12,000 00	400 00	4,000 00	16,400 00
James	2	11	21	34	..	..	..	9,878 00	..	..	9,878 00
Jefferson .....	..	10	2	12	..	..	..	3,500 00	30 00	..	3,530 00
Johnson	1	17	12	30	3	3	3	8,000 00	150 00	1,000 00	9,150 00
Knox	2	24	46	72	2	2	4	10,550 00	..	320 00	10,870 00
Lake .....	..	2	4	6	2	..	2	400 00	..	150 00	550 00
Lauderdale .....	..	..	..	..	..	..	..	..	..	..	..
Lawrence .....	..	..	..	..	..	..	..	..	..	..	..
Lewis .....	..	..	..	..	..	..	..	..	..	..	..

TABLE VIII.—Continued.

COUNTIES.	No. and Character of School Houses.				School Houses Erected during the Year.				Estimated Value of School Houses, including Sites, Grounds, Desks, Seats, etc.	Estimated Value of School Apparatus, viz., Globes, Maps, Charts, Blackboards, etc.	Value of School Houses Erected during Year.	Total Estimated Value of School Property.
	Stone or Brick.	Frame.	Log.	Total.	Stone or Brick.	Frame.	Log.	Total.				
Lincoln	4	49	24	77	5	1	6	12	\$18,285 00	\$903 00	\$1,520 00	\$20,708 00
Loudon	1	22	17	40	4	4	3	11	8 075 00	219 00	815 00	9,108 00
Macon	3	30	23	53	3	3	3	9	5,000 00	800 00	524 00	6,324 00
Madison	1	39	23	63	5	2	7	14	8,610 00	60 00	200 00	8,900 00
Marion	1	8	16	25	1	1	2	4	5,775 00	336 00	.....	6,111 00
Marshall	3	65	12	80	10	1	10	21	41,332 40	621 00	6,000 00	47,953 40
Maury	1	49	20	70	1	1	1	3	12,450 00	594 00	500 00	13,544 00
McMinn .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
McNairy	1	54	36	91	3	3	3	9	9,000 00	750 00	225 00	9,975 00
Meigs .....	.....	16	6	22	.....	.....	.....	.....	2,350 00	75 00	.....	2,425 00
Monroe .....	.....	36	22	58	3	3	3	9	9,436 44	963 21	7 8 49	11,158 14
Montgomery ..	2	22	35	59	5	1	6	12	36,760 00	210 50	1,825 00	38,795 50
Moore .....	.....	6	11	17	1	1	1	3	2,550 00	250 00	50 00	2,850 00
Morgan .....	.....	11	13	24	2	2	2	6	2,435 00	75 00	400 00	2,910 00
Obion	4	53	39	96	2	2	2	6	17,700 00	4,400 00	900 00	23,000 00
Overton .....	.....	12	58	63	2	2	2	6	.....	.....	.....	.....
Perry .....	.....	13	33	46	.....	.....	.....	.....	5,725 00	75 00	.....	5,800 00
Pickett .....	.....	7	8	15	.....	.....	.....	.....	3 350 50	.....	.....	3,350 50
Polk	2	16	27	45	1	1	2	4	4,000 00	200 00	300 00	4,500 00
Putnam .....	.....	10	50	60	2	2	2	6	5,900 00	150 00	250 00	6,300 00
Rhea	2	10	15	27	2	2	2	6	.....	.....	.....	.....
Ruane	1	30	18	49	1	1	2	4	19 487 00	100 00	500 00	20,087 00
Robertson	7	24	25	56	1	1	1	3	15,000 00	2 0 00	100 00	15,350 00
Rutherford	3	65	28	96	2	2	2	6	28,000 00	494 00	1,750 00	30,244 00
Scott .....	.....	12	17	29	4	3	7	14	3,510 00	98 50	813 25	4,421 75
Sequatchie .....	.....	5	6	11	.....	.....	.....	.....	8,200 00	34 00	.....	8,234 00
Sevier	1	53	20	74	2	1	3	6	9,580 00	250 00	800 00	10,630 00
Shelby .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Smith .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Stewart .....	.....	22	41	63	2	2	2	6	10,900 00	1,200 00	375 00	11,575 00
Sullivan	3	34	28	65	1	6	7	14	20,121 00	1,417 00	2,973 00	25,511 00
Sumner	3	50	43	96	2	2	2	6	9,000 00	100 00	.....	9,100 00
Tipton	1	55	14	70	6	2	8	14	16,000 00	750 00	2,000 00	18,750 00
Trousdale	2	14	9	25	.....	.....	.....	.....	3,750 00	300 00	.....	4,050 00
Unicoi	1	3	10	14	.....	.....	.....	.....	1,200 00	50 00	.....	1,250 00
Union	1	20	29	50	2	2	2	6	.....	.....	.....	.....
Van Buren .....	.....	2	16	18	1	1	1	3	1,900 00	50 00	50 00	2,000 00
Warren	4	30	45	79	1	1	1	3	13,800 00	350 00	300 00	14,450 00
Washington ..	6	24	22	52	1	1	1	3	24,110 00	445 64	400 00	24,955 64
Wayne	1	15	24	40	2	2	4	8	4,635 00	25 00	300 00	4,960 00
Weakley	2	80	60	142	6	4	10	20	29,000 00	3,000 00	2,800 00	34,800 00
White .....	.....	16	35	51	2	2	2	6	8,450 00	200 00	800 00	9,450 00
Williamson .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Wilson	2	53	25	80	4	4	4	12	25,000 00	.....	2,500 00	27,500 00
TOTAL	137	2449	2149	4735	5	187	74	266	\$1,229,060 73	\$39,207 40	\$99,176 62	\$1,367,444 75

TABLE IX.

Showing the number of Private Schools, number of Teachers in same, number of Pupils enrolled, Average Daily Attendance, and Average Cost of Tuition per Pupil per Month.

COUNTIES.	No. of Private Schools taught During Year.	Number of Teachers.	No. of Pupils Enrolled Within Year.	Average Daily Attendance.	Average Cost of Tuition per Pupil per M th .
Anderson					
Bedford	20	30	800	600	\$1 25
Benton	12	12	250	150	1 00
Bledsoe	8	8			1 25
Blount	8	12	782	672	1 00
Bradley	4	6	280	200	1 50
Campbell					
Cannon	20	26	400		1 50
Carroll	34	28	1094	795	1 42
Carter					
Cheatham	17	17	465	386	1 57
Chester	20	20	400	205	1 25
Claiborne	8	8	320	182	1 50
Clay	3	4	111	97	1 50
Cocke					
Coffee	18	31	811		2 00
Crockett	10	11	230	155	1 35
Cumberland	3	3	160	129	1 00
Davidson	9	72	1200		
Decatur	10	12	350	350	1 50
DeKalb	25	30	1357	678	1 35
Dickson	38	38	570	91	1 50
Dyer	6	6	300	150	2 00
Fayette	25	31	270	65	2 10
Fentress	11	11	699	588	1 25
Franklin					
Gibson	16	24	881	607	1 69
Giles					
Grainger	3	4			1 25
Greene	3	3	65	60	1 00
Grundy	4	4	100	96	2 25
Hamblen	2	5	125	105	1 90
Hamilton	13	13	359	218	1 15
Hancock	5	7	290	220	1 50
Hardeman					
Hardin	12	15	635	487	2 00
Hawkins	9	11	450	342	1 15
Haywood					
Henderson					
Henry	27	31	914	787	1 75
Hickman					
Houston					
Humphreys	13	19	497	374	1 75
Jackson					
James	3	3	204	185	1 60
Jefferson	7	10	2350	681	1 37
Johnson					

TABLE IX.—*Continued.*

COUNTIES.	No. of Private Schools taught During Year.	Number of Teachers.	No. of Pupils Enrolled Within Year.	Average Daily Attendance.	Average Cost of Tuition per Pupil per M th .
Knox	36	36	1000	900	1 00
Lake	3	3	80	20	2 00
Lauderdale	10	15	416	312	2 50
Lawrence	13	14	302	242	1 56
Lewis .....	.....	.....	.....	.....	.....
Lincoln	33	36	1212	799	1 65
Loudon	7	7	166	127	1 00
Macon	4	6	140	100	1 25
Madison .....	.....	.....	.....	.....	.....
Marion .....	.....	.....	.....	.....	.....
Marshall	32	45	2122	1511	1 87
Maury .....	.....	.....	.....	.....	.....
McMinn	2	2	.....	.....	.....
McNairy	6	10	420	387	1 50
Meigs .....	.....	.....	.....	.....	.....
Monroe	23	27	903	501	1 14
Montgomery	14	23	448	381	2 81
Moore	14	14	300	255	1 00
Morgan	5	5	.....	.....	.....
Obion	43	43	1219	1200	1 95
Overton .....	.....	.....	.....	.....	.....
Perry	5	5	.....	.....	1 50
Pickett	6	9	300	48	2 00
Polk	8	9	296	250	1 12
Putnam	12	12	320	180	1 00
Rhea .....	.....	.....	.....	.....	.....
Roane .....	.....	.....	.....	.....	.....
Robertson .....	.....	.....	550	.....	.....
Rutherford	20	.....	25	.....	12 50
Scott	1	1	66	35	1 00
Sequatchie	4	4	300	50	1 50
Sevier	6	9	500	240	1 00
Shelby .....	.....	.....	.....	.....	.....
Smith .....	.....	.....	.....	.....	.....
Stewart .....	.....	.....	.....	.....	.....
Sullivan	23	28	610	155	1 20
Sumner	13	17	.....	.....	.....
Tipton	7	12	300	200	3 00
Trousdale	6	6	270	175	1 50
Unicoi .....	.....	.....	.....	.....	.....
Union	5	5	200	125	1 25
Van Buren	2	7	140	126	2 00
Warren	16	16	640	590	1 50
Washington	4	6	142	133	1 35
Wayne	15	17	372	262	1 14
Weakley	28	28	565	440	1 65
White .....	.....	.....	.....	.....	.....
Williamson .....	.....	.....	.....	.....	.....
Wilson	43	43	1700	.....	2 00
TOTAL.....	893	1085	33743	27389	\$1 70

TABLE X.—Showing Average Number of Days Taught During the Year, Average Compensation of Teachers per Month, and Average Cost of Tuition per Pupil per Month, County Tax for School Purposes, including Poll, Property and Privileges, and Result of Election by the People on School Tax.

COUNTIES.	Average No. of Days Taught During Year.	Average Compensation of Teachers per Month.	Average Cost of Tuition per Pupil per Mo.	Amount of County Debt to Schools.	COUNTY TAX FOR SCHOOL PURPOSES.			RESULT OF ELECTION BY THE PEOPLE ON SCHOOL TAX, IF ANY HELD.
					On Polls.	On Property.	On Privileges.	
Anderson	90	\$30 00	\$ 60	.....	\$1 00	.02	.01	No election.
Bedford	46	25 00	60	.....	50	.15	.....	Voted down.
Benton	60	23 25	63	.....	50	.15	.10	.....
Blelcoe	78	26 30	1 63	.....	1 00	.25	.15	None held.
Blount .....	.....	.....	.....	.....	.....	.02	.25	None held.
Bradley	98	28 00	28	.....	50	.20	.30	.....
Campbell	45	23 00	45	.....	25	.15	.15	.....
Cannon	52	27 42	91	.....	1 00	.15	.....	Levied by court.
Carroll	90	25 00	25	.....	25	.10	.....	.....
Carter	80	26 00	65	.....	1 00	.35	.10	Levied by court.
Cheatham	60	27 50	75	.....	1 00	.17	.10	Voted.
Chester	74	22 50	1 00	.....	1 00	.....	.....	No election.
Claiborne	60	25 00	.....	.....	50	.20	.20	.....
Clay .....	.....	22 50	.....	.....	.....	.10	.....	.....
Coke	66	27 50	.....	.....	25	.10	.10	No election.
Coffee	49	30 60	.....	.....	1 00	.25	.....	No election.
Crockett .....	.....	20 00	.....	.....	.....	.....	.....	.....
Cumberland	170	49 79	1 16	.....	1 00	.20	.....	Levied by co. court.
Davidson	50	28 00	70	.....	25	.18	.10	.....
Decatur	120	30 00	26	.....	50	.20	.....	Voted.
DeKalb	60	22 50	75	.....	1 00	.15	.....	.....
Dickson .....	.....	.....	.....	.....	.....	.....	.....	.....

Dyer.....	100	32 00	1 20	1 00	.15 $\frac{1}{4}$ State Tax.	No election.
Payette.....	66	30 15	72	1 50	.15	Voted.
Fentress.....	60	22 00	33	.....	.25	No election.
Franklin.....	.....	.....	.....	1 00	.30 $\frac{1}{4}$ State tax.	No election.
Gibson.....	109	35 13	87	1 00	.10	No election.
Giles.....	90	23 00	80	1 00	.25	No election.
Grainger.....	80	26 00	.....	1 00	.10	No election.
Greene.....	93	28 22	50	25	.....	.....
Grundy.....	88	30 00	.....	.....	.....	.....
Hamblen.....	80	25 38	.....	50	.10	No election.
Hamilton.....	131	46 16	1 25	1 00	.10	Tax by county court.
Hancock.....	56	21 71	.....	1 00	.....	No election.
Hardeman.....	66	30 90	.....	1 00	.20	No election.
Hardin.....	80	32 00	50	1 00	.35	No election.
Hawkins.....	.....	25 00	.....	50	.10	No election.
Haywood.....	63	27 25	.....	1 00	.10	No election.
Henderson.....	.....	.....	.....	.....	.....	.....
Henry.....	90	24 90	43	50	.30	No election.
Hickman.....	.....	.....	.....	.....	.....	.....
Houston.....	100	30 00	.....	1 00	.50 $\frac{1}{4}$ State tax.	No election.
Humphreys.....	55	25 00	50	50	.30 $\frac{1}{4}$ State Tax.	.....
Jackson.....	.....	.....	.....	.....	.....	.....
James.....	94	34 00	46	1 00	.30	No election.
Jefferson.....	87	29 00	78	50	.15	No election.
Johnson.....	86	25 00	.....	1 00	.26	No election.
Knox.....	141	36 66	1 06	1 00	.15	.....
Lake.....	94	43 75	87	1 00	.10	None held.
Lauderdale.....	49	30 00	65	1 00	.....	.....
Lawrence.....	55	22 50	54	50	.30	No election.
Lewis.....	80	22 00	40	50	.20	.....
Lincoln.....	81	33 00	60	18	.....	.....
Loudon.....	80	27 55	58	50	.15	No election.
Macon.....	70	27 10	65	1 00	.20	Levied by court.
Madison.....	100	26 17	43	1 00	.10	No election.
Marion.....	100	30 00	.....	1 00	.25	No election.
Marshall.....	102	37 00	45	1 00	.....	Favorable.
Maury.....	70	28 91	75	1 00	.05 $\frac{1}{4}$ State tax.	No election.

TABLE X.—*Showing Average Number of Days Taught During the Year, Average Compensation of Teachers per Month, and Average Cost of Tuition per Pupil per Month, County Tax for School Purposes, including Poll, Property and Privileges, and Result of Election by the People on School Tax.*

COUNTIES.	Average No. of Days Taught During Year.	Average Compensation of Teachers per Month.	Average Cost of Tuition per Pupil per Mo.	Amount of County Debt to Schools.	COUNTY TAX FOR SCHOOL PURPOSES.			RESULT OF ELECTION BY THE PEOPLE ON SCHOOL TAX, IF ANY HELD.
					On Polls.	On Property.	On Privileges.	
Anderson	90	\$30 00	\$ 60	.....	\$1 00	.02	.....	No election.
Bedford	46	25 00	60	.....	50	.15	.....	Voted down.
Benton	60	23 25	63	.....	50	.15	.....	None held.
Blelcoe	78	26 30	1 63	.....	1 00	.25	.....	None held.
Blount .....	.....	.....	.....	.....	50	.02	.....	.....
Bradley	98	28 00	28	.....	1 00	.15	.....	Levied by court.
Campbell	45	23 00	45	.....	25	.20	.....	.....
Cannon	52	27 42	91	.....	1 00	.10	.....	Levied by court.
Carroll	90	25 00	25	.....	25	.35	.....	Voted.
Carter	90	26 00	65	.....	1 00	.17	.....	No election.
Cheatham	60	27 50	75	.....	1 00	.....	.....	.....
Chester	74	22 50	1 00	.....	50	.20	.....	.....
Claiborne	60	25 00	.....	.....	.....	.10	.....	No election.
Clay .....	.....	22 50	.....	.....	25	.10	.....	No election.
Coke	66	27 50	.....	.....	1 00	.25	.....	Levied by co. court.
Coffee	49	30 60	.....	.....	.....	.....	.....	Voted.
Crockett .....	.....	20 00	.....	.....	1 00	.20	.....	.....
Cumberland	170	49 79	1 16	.....	1 00	.18	.....	.....
Davidson	50	28 00	70	.....	50	.20	.....	.....
Decatur	120	30 00	26	.....	1 00	.15	.....	.....
DeKalb	60	22 50	75	.....	.....	.....	.....	.....
Dickson .....	.....	.....	.....	.....	.....	.....	.....	.....

Dyer.....	100	32 00	1 20	1 00	.15	1/2 State Tax.	No election.
Payette.....	66	30 15	72	1 50	.15	.....	Voted.
Fontenay.....	60	22 00	33	.....	.25	.....	No election.
Franklin.....	109	35 13	87	1 00	.30	1/2 State tax.	No election.
Gibson.....	90	33 00	80	1 00	.20	.10	No election.
Giles.....	80	26 00	.....	1 00	.10	.....	No election.
Grainger.....	93	28 22	50	1 25	.25	.....	No election.
Greene.....	88	30 00	.....	.....	.....	.....	No election.
Grundy.....	80	25 38	.....	50	.10	.....	No election.
Hamblen.....	131	46 16	1 25	1 00	.10	.....	Tax by county court.
Hamilton.....	56	21 71	.....	1 00	.10	.....	No election.
Hancock.....	66	30 90	.....	1 00	.20	.....	No election.
Harteman.....	80	32 00	50	1 00	.35	.....	No election.
Hardin.....	.....	25 00	.....	50	.10	.....	No election.
Hawkins.....	63	27 25	.....	1 00	.10	.....	No election.
Haywood.....	.....	.....	.....	.....	.....	.....	No election.
Henderson.....	90	24 90	43	50	.30	.....	No election.
Henry.....	.....	.....	.....	.....	.....	.....	No election.
Hickman.....	100	30 00	.....	1 00	.50	1/2 State tax.	No election.
Houston.....	55	26 00	50	50	.30	1/2 State Tax.	No election.
Humphreys.....	.....	.....	.....	.....	.....	.....	No election.
Jackson.....	94	34 00	46	1 00	.30	.....	No election.
James.....	87	29 00	78	50	.15	.....	No election.
Jefferson.....	88	25 00	50	1 00	.26	.....	No election.
Johnson.....	141	36 65	1 06	1 00	.15	.....	No election.
Knox.....	94	43 75	87	1 00	.10	.....	None held.
Lake.....	49	30 00	65	1 00	.....	.....	No election.
Lauderdale.....	55	22 50	54	50	.30	.....	No election.
Lawrence.....	80	22 00	40	50	.20	.....	No election.
Lewis.....	81	33 00	60	18	.....	.....	No election.
Lincoln.....	80	27 55	58	50	.15	.....	No election.
Loudon.....	70	27 10	65	1 00	.20	.....	Levied by court.
Macon.....	100	26 17	43	1 00	.10	.....	No election.
Madison.....	100	30 00	.....	1 00	.25	.....	No election.
Marion.....	102	37 00	45	1 00	.25	Same as State	Favorable.
Marshall.....	70	28 91	75	1 00	.05	1/2 State tax.	No election.
Maury.....	.....	.....	.....	.....	.....	.....	No election.

TABLE X.—Continued.

COUNTIES.	Average No. of Days Taught During Year.	Average Compensation of Teachers per Month.	Average Cost of Tuition per Pupil per Mo.	Amount of County Debt to Schools.	COUNTY TAX FOR SCHOOL PURPOSES.			RESULT OF ELECTION BY THE PEOPLE ON SCHOOL TAX, IF ANY HELD.
					On Polls.	On Property.	On Privileges.	
McMinn	50	29 00	85	.....	1 00	.30	.....	.....
McNairy	60	35 00	.....	.....	.....	.30	.30	No election.
Meigs	60	.....	69	.....	.....	.10	.....	.....
Monroe	79	23 09	.....	.....	.....	.15	.....	.....
Montgomery	88	30 43	97	.....	1 00	.10	.....	.....
Moore	60	26 50	50	.....	1 00	.10	.....	No election.
Morgan	65	30 00	60	.....	1 00	.30	.....	No election.
Obion	98	35 50	60	.....	1 00	.20	.....	No election.
Overton .....	.....	.....	.....	.....	1 00	.20	.....	.....
Perry	85	26 50	76	.....	1 00	.20	.....	.....
Pickett	60	20 00	1 25	.....	1 00	.10	.....	Voted.
Polk	60	25 00	40	.....	50	.....	.....	No election.
Putnam	70	22 00	.....	.....	.....	.....	.....	.....
Rhea	80	31 33	.....	.....	50	.30	.10	.....
Roane	83	31 81	88	.....	50	.18	State tax.	Levied by court.
Robertson	80	27 50	1 00	.....	1 00	.15	Same as State	.....
Rutherford	112	28 31	.....	.....	1 00	.15	.....	.....
Scott	57	23 00	63	.....	10	.10	.....	No election.
Sequatchie	75	24 30	48	.....	25	.20	.....	No election.
Sevier .....	.....	.....	.....	.....	.....	.....	.....	.....
Shelby	80	30 00	1 00	.....	1 00	.25	Same as State	.....
Smith	96	29 00	1 84	.....	.....	.30	Same as State	No election.
Stewart	61	24 15	62	.....	50	.10	.....	No election.
Sullivan	90	29 22	58	.....	1 00	.20	.....	No election.
Sumner	100	35 80	75	.....	1 00	.20	Same as State	No election.
Tipton .....	.....	.....	.....	.....	.....	.....	.....	.....

Trousdale	62	85 00	1 80	.....	1 00	.25	.....	Voted.
Unicol ..	70	22 50	85	.....	25	.20	.....	No election.
Union	70	25 00	30	.....	20	.10	.....	No election.
Van Buren.....	.....	.....	.....	.....	1 00	.10	.....	No election.
Warren	80	27 20	48	.....	50	.15	.10	No election.
Washington	86	28 25	55	.....	50	.30	25 per cent.	No election.
Wayne	48	22 68	65	.....	70	.05	State tax.	Levied by co. court.
Weakley	80	30 00	70	.....	50	.25	.....	No election.
White	55	26 50	53	.....	.....	.....	.....	No election.
Williamson.....	108	27 00	.....	.....	1 00	.15	.....	No election.
Wilson.....	90	36 00	.....	.....	1 00	.15	.....	No election.
Total	78	\$28 41	\$.59	.....	.....	.....	.....	.....

TABLE X.—Continued.

COUNTIES.	Average No. of Days Taught During Year.	Average Compensation of Teachers per Month.	Average Cost of Tuition per Pupil per Mo.	Amount of County Debt to Schools.	COUNTY TAX FOR SCHOOL PURPOSES.			RESULT OF ELECTION BY THE PEOPLE ON SCHOOL TAX, IF ANY HELD.
					On Polls.	On Property.	On Privileges.	
McMinn	50	29 00	85	.....	1 00	.30	.....	.....
McNairy	60	35 00	.....	.....	.....	.....	.30	.....
Meigs	79	23 09	69	.....	.....	.10	.....	.....
Monroe	88	30 43	97	.....	1 00	.15	.....	No election.
Montgomery	60	26 50	50	.....	1 00	.10	.....	.....
Moore	65	30 00	60	.....	1 00	.10	.....	No election.
Morgan	98	35 50	60	.....	1 00	.30	.....	No election.
Obion .....	.....	.....	.....	.....	.....	.....	.....	No election.
Overton	85	26 50	.....	.....	1 00	.20	.....	.....
Perry	60	20 00	76	.....	1 00	.....	.....	.....
Pickett	60	25 00	1 25	.....	1 00	.20	.....	Voted.
Polk	70	22 00	40	.....	50	.10	.....	No election.
Puinam .....	.....	.....	.....	.....	.....	.....	.....	.....
Rhea	80	31 33	.....	.....	50	.30	.....	.....
Roane	83	31 81	88	.....	50	.18	State tax.	Levied by court.
Robertson	80	27 50	1 00	.....	1 00	.15	Same as State	.....
Rutherford	112	28 31	.....	.....	1 00	.15	.....	.....
Scott	57	23 00	63	.....	10	.10	.....	No election.
Sequatchie	75	24 30	48	.....	25	.20	.....	No election.
Sevier .....	.....	.....	.....	.....	.....	.....	.....	.....
Shelby	80	30 00	1 00	.....	.....	.....	.....	.....
Smith	96	23 00	1 84	.....	1 00	.25	Same as State	No election.
Stewart	61	24 15	62	.....	50	.10	Same as State	No election.
Sullivan	90	29 22	58	.....	1 00	.20	.....	No election.
Sumner	100	35 80	75	.....	1 00	.20	Same as State	No election.
Tipton .....	.....	.....	.....	.....	.....	.....	.....	.....

Trousdale	62	85 00	1 80	.....	1 00	.25	.....	Voted.
Unicoi	70	22 50	85	.....	25	.20	.....	No election.
Union	70	25 00	30	.....	20	.10	.....	No election.
Van Buren .....	.....	.....	.....	.....	1 00	.10	.....	No election.
Warren	80	27 20	48	.....	50	.15	.10	.....
Washington	86	28 25	55	.....	50	.30	25 per cent.	No election.
Wayne	48	22 66	65	.....	70	.05	State tax.	Levied by co. court.
Weakley	80	30 00	70	.....	50	.25	.....	No election.
White	55	26 50	53	.....	.....	.....	.....	.....
Williamson	108	27 00	.....	.....	1 00	.15	.....	No election.
Wilson	90	36 00	.....	.....	1 00	.15	.....	No election.
Total	78	\$28 41	\$.59	.....	.....	.....	.....	.....

REPORT
OF THE
State Board of Education.

4—School.

STATE BOARD OF EDUCATION.

HIS EXCELLENCY WM. B. BATE, *ex officio* President.

DR. J. BERRIEN LINDSLEY, *Secretary and Treasurer.*

HON. W. P. JONES, M. D.

REV. DR. J. W. HOYTE,

PROF. FRANK GOODMAN,

HON. LEON. TROUSDALE,

HON. THOMAS H. PAINE.

OFFICE OF THE STATE BOARD OF EDUCATION,

NASHVILLE, TENN., February 18, 1885.

To His Excellency WM. B. BATE, Governor of Tennessee:

SIR—In compliance with section 3, chapter CCCLV., Acts of Tennessee, 1883, I present to you the following Report of the State Board of Education.

Very respectfully,

J. BERRIEN LINDSLEY,

Secretary.

REPORT
OF THE
STATE BOARD OF EDUCATION.

An accompaniment or outgrowth of the general interest in universal education, is the creation of a numerous profession of teachers and the establishment of special schools for their training. In all European governments, and in almost all of the American States, normal schools are maintained, at large cost, for educating teachers, who are thus put on a level with the liberal professions, to whose benefit training schools were formerly limited. In the United States there were, in 1882, 97 normal schools, with 827 teachers and 17,964 pupils, supported by thirty-two States. The six States making the largest annual appropriations are New York, \$138,256; Virginia, \$112,049 (including \$100,000 for site and buildings); Massachusetts, \$85,899; Pennsylvania, \$79,054; California, \$62,000, and Illinois, \$51,264. In all these States the leading cities also in addition expend large sums upon normal schools.

The Southern States making the largest annual appropriations for this purpose, in 1882, were, Texas, \$18,000; Alabama, \$15,500, white and colored; Maryland \$12,000, white and colored; Tennessee \$12,500, white and colored; Virginia \$12,000, white and colored.

All the above-mentioned sums for 1882, it must be noted, were annual appropriations for the maintenance of normal colleges, with the one exception mentioned.

It has been the singular good fortune of Tennessee to secure, at very small cost, one of the most noted normal colleges in the Union.

In 1867, George Peabody, one of the most remarkable business men in America or Britain, made a foundation, while living, upon which to rebuild the educational systems of the eleven States laid waste by the great civil war of 1861-65. This princely donation was two million dollars.

After 1897, the trustees have the power to close the trust, and "to distribute not less than two-thirds among such educational or literary institutions, or for such educational purposes, as they may determine, in the States for whose benefit the income is now appointed to be used. The remainder may be distributed by the trustees for educational or literary purposes, wherever they may deem it expedient."

Up to November 4, 1869, when Mr. Peabody died, he gave much time and thought to this grand work. In accordance with his views, it is probable that in a few years the trust will be closed, and two or three high normal colleges be the recipients of the sple did fund.

Tennessee may secure the great Peabody Normal School of the South.

Soon after the appointment of Rev. Dr. B. Sears as agent of the Peabody Education Fund, the trustees of the University of Nashville opened a correspondence with him, looking to the establishment of a grand central normal college in Tennessee. Dr. Sears visited Nashville annually until 1875, when this plan became a reality.

The State at first gave only its name. The University of Nashville furnished extensive grounds, with large and commodious buildings, not to be estimated at less than two hundred thousand dollars in value. The Peabody Trust furnished funds to support the institution. In 1881 the State, for the first time, made an appropriation. In 1883, the General Assembly gave ten thousand dollars per annum for the general purposes of the College, subject to the order of the State Board of Education.

How this fund has been expended, and what is the present condition of the College, may be learned from the following report from the Chancellor of the University of Nashville to the State Board of Education :

STATE NORMAL COLLEGE.

REPORT OF THE CHANCELLOR OF THE UNIVERSITY OF NASHVILLE.

To the State Board of Education of Tennessee.

GENTLEMEN:—I beg leave to present herewith a report of the State Normal College, for the two years ending September 1, 1884. This report will be, however, mainly a summary of reports presented to your honorable body, from time to time, during this period.

The whole number of different students in attendance has been 265, of whom 101 were male and 164 females. One hundred were from Tennessee.

The health of the students has been exceptionally good ; and, were due regard paid in every case to the requirement that students shall be in good health at the time of admission, it is believed that, with the constant watchfulness observed at the College, and the appliances used to promote health and vigor, physical disability might be reduced to its minimum.

In common with many of our most important institutions we suffered some disturbance, from a few discontented persons, during the autumn and winter of 1883-4, who, as is commonly the case, made the most of opportunities for trouble. But the cloud soon passed away, leaving the College more firmly seated than ever in the confidence and affection of the community ; and the period covered by this report closed with a full measure of its characteristic order and quietness, and after one of its most successful commencements, at which a class of thirty-seven "took their degrees." It is but just to add that the students generally have shown a commendable interest in the work required of them at the College, and a determination to make the best possible use of the great advantages afforded them.

The College, as an appropriate and efficient institution for the instruction and training of teachers, has certainly met with increasing favor, and testimony is abundant that its diploma, or a certificate from its President, is an almost sure passport to the best grades of employment.

INCREASE OF NUMBERS.

It would be easy to increase the number of the students almost without limit, by lowering the standard of scholarship, and becom-

ing less determined that those who so freely enjoy these privileges shall give to the public the benefit of their acquisitions.

It cannot be expected, however, that this or any other institution for the training of teachers exclusively, will furnish all that are required to conduct the hundreds of schools of different grades in this community, but it is confidently hoped and believed that every teacher sent out with the full approbation of the College will exert so wise, enlightened and powerful an influence over a wide region, as not only to offer to the public the best examples of school management and instruction, but also to awaken and foster a desire among surrounding teachers to do their work in the most skillful and philosophic manner. One well-instructed and trained teacher will become, obviously, a source of knowledge, enlightenment and encouragement, so powerful as to render his services, however modestly put forth, invaluable.

We might, however, without the disastrous measure of winking at inferior ability and scholarship, and lowering our standard of instruction—and with a comparatively small additional expense—educate a much larger number than we do, were the inducements for young men and women to devote their best energies to the teacher's profession sufficiently great, and were the business so attractive and remunerative as to lead persons, suitably endowed by nature, to give up two or three years of time and labor, involving considerable out-right expense, to the work of preparation, with nothing to allure, but the prospect of irksome confinement among children, with unremitting drafts upon sympathy, patience, nerve-power and almost every resource; often at the mercy of the merest whim, caprice or prejudice, with small compensation, granted for a limited number of months only, each year, and with but little reason to expect that their most self-denying efforts will ever result in more than a mere pecuniary competency. It may indeed be true that, if faithful, devoted, earnest, the time will come when they shall find, "Well done, good and faithful servants," emblazoned against their names on Heaven's imperishable scrolls; yet, to most, the reward in this world seems slow in coming.

At present, attractive enterprises and employments, requiring but little time or labor to meet their demands, entice our young men and women on every side. The bold, active, intelligent, whom we most need in the teacher's profession, are the first to see in them an

abundant opportunity for the present exercise of all their powers, and in the not distant future, the glittering prizes of wealth and honor. It is easy to see that the teacher's occupation must be made equally attractive and prospectively remunerative, or it will be relegated in a great measure to inferior persons, as unworthy of the best types of young manhood. Until this is the case, we shall look in vain for large numbers of candidates for our best normal institutions,—while just in proportion, as this grandest of professions, could everyone see it in that light, approximates this condition of affairs, will the best blood of the community flow into them.

BUILDINGS AND GROUNDS.

The buildings and grounds occupied by the College, as is well known, belong to the University of Nashville, whose first century the coming year completes. Its enlightened Board of Trust are not only devoting their large property, with comparatively small reserves or conditions, to promote normal instruction and to secure to Tennessee the benefits of what the distinguished chairman of "the Peabody Education Fund," Hon. Robt. C. Winthrop, LL. D., in his opening address at their last annual meeting, designates as "OUR GREAT NORMAL COLLEGE, AT NASHVILLE," but have never hesitated to permit alterations and changes in buildings and premises, to meet the wants of the College, to be made, or to comply with every requisition within their corporate power.

The buildings which were greatly dilapidated by the exigencies of war, when we first took possession, are gradually approaching a state of comparative soundness—but will require more or less repairs each year. Should the number of students, which fills our rooms at the present time to nearly their full capacity, be much increased, some additions would become necessary. The grounds, which have been rescued from weeds and barrenness, are already becoming, in some measure, the requirements of a great and prosperous institution. More grading will have to be done, as time passes, paths made, drives laid out, and the whole must, ere long, be surrounded by an appropriate and substantial fence and sidewalk.*

*NOTE.—Since this was written, I have received from the City Board of Public Works and Affairs a request for a conference concerning this very thing. Of course, should they make a formal demand for these improvements, as probably they will, it will have to be met.

The improvements and additions already made or in progress, considering the small sum of money used for the purpose, are believed to have been judicious and successful. Among them I would particularly call attention to the

EWING GYMNASIUM,

Named for the venerable President of the University Board of Trust, and, I believe, its oldest living graduate. The building occupies in part the site of the "Old Faculty House," so called, or, rather, is a portion of that building, detached and remodeled in such manner as to adapt it to the purposes of a gymnasium; at the same time constituting an agreeable and appropriate feature of the buildings and grounds.

The apparatus, which is of the most modern and approved kind, was furnished by Dr. D. A. Sargent, the learned scientist, and director of the Hemingway Gymnasium, at Cambridge, the largest and most successful institution for physical development and culture in this country, where more than a thousand men are in daily attendance; and is the same as used by the "Athletic Associations" of St. Louis, Boston, Johns Hopkins University, Amherst College, the University of Virginia, etc.

Its design is, of course, in part, to offer a source of rational amusements to the students, but more particularly to promote health, strength and development in accordance with the advanced knowledge of the times in anatomy, physiology and hygiene; and thus not only to prepare our students, by study and exercise, for the wearing duties of the teacher's profession, but also to instruct and train the children and young persons committed to their care, so that they may be in a condition to meet the demands which will be made upon them in actual life.

The gentlemen are to be placed under the care of a skilled instructor, whom we have arranged to employ in connection with Vanderbilt University; his time being divided between the two institutions equally, and both contributing a proportionate share of his compensation.

The ladies at the College are to be in charge of a lady director, who is not only skilled in gymnastic exercises, but who, by study and training, is fully acquainted with the character and requirements of her sex. She will make the pupils a study individually, and then

prescribe the nature and amount of exercise best adapted to their condition.

It will be expected that she will look after the sick, when there are such, and give the aid and advice required by their condition.

It seems to be the universal opinion of medical men and educators that our sanitary gymnasium is one of the most important of the recent improvements at the College, and is destined to exert a powerful influence upon physical training throughout the South. Some of these gentlemen, among whom are Dr. Lindsey, Dr. Plunket, Dr. Wright—the vigilant and distinguished officers of the State Board of Health—and Dr. Maddin, of the City Board, have made a personal inspection.

In this connection, I beg leave to call the attention of the Board to another of the appliances used at the College for the promotion of the well-being of the students, which has attracted considerable attention, as an unique and desirable feature of the College. It is called a "Board of Health and Comfort," and will be found described in Appendix "B," to this report.

THE LABORATORY.

A portion of Lindsley Hall, which was rescued from decay and ruin a few years ago, and made an important addition to the College buildings, has been remodeled, and is now being fitted up as a working chemical laboratory, and will be, when completed and furnished with necessary apparatus, one of the most extensive, convenient and best appointed laboratories in this part of the country. It will be placed in charge of Prof. W. C. Day, Ph. D., of Baltimore, Md., as instructor in chemistry and natural science, who comes to us from St. John's College, at Annapolis, Md., and on the most unqualified recommendation of Dr. Ira Remsen, the distinguished chemist of Johns Hopkins University, where, after graduating, he won, by merit, a fellowship, and, finally, the significant degree of "Doctor of Philosophy."

By this arrangement, all our students will have opportunity for obtaining a practical knowledge of one of the most important, as well as most progressive, natural sciences, while such as wish to pursue the study as a *specialty* will have the most favorable advantages. Agricultural chemistry, metallurgy, and all that belongs to the reducing and assaying of ores, so important when viewed in connec-

tion with the development of the natural resources of the State together with the analyses required from time to time by the State Board of Health, etc., may thus be carried on under the most favorable conditions.

PEABODY SCHOLARSHIPS.

It is well known that a number of scholarships were established at the College in the year 1876, by the trustees of the Peabody Education Fund, "for the encouragement and aid of students from the different Southern States, whose characters, abilities, general culture and health give special promise of usefulness as teachers." This number has now reached one hundred and fourteen, and is apportioned among these States by the "General Agent" of the Board. These scholarships are in much request, and are kept as full as the contingencies of sickness, etc., will permit.

The nominations to the scholarships are made by the Superintendents of Public Instruction, in the different States, on the conditions prescribed by the Fund supporting them. I take great pleasure in stating that these gentlemen, as an almost universal rule, have performed this responsible and sometimes burdensome duty with signal intelligence, conscientiousness and desire to promote the objects for which the scholarships were established.

"These scholarships," however (I quote from the "Requirements, etc.,") "will, in no case, be continued to students whose rank or standing is low, whose general demeanor is objectionable, who do not give promise of usefulness as teachers, or whose health or other circumstances prevent constant attendance on or performance of College duties."

Fourteen scholarships, the largest number given to any State, worth twenty-eight hundred dollars a year, were apportioned to Tennessee, in the year 1883, in response to an act of her Legislature, appropriating ten thousand dollars annually to aid in the support of the College.

STATE APPROPRIATION.

A tabulated statement of receipts from the State appropriation and expenditures of the same is appended to this report, Appendix A. Of the whole sum, i. e., \$20,000 for two years, but \$10,000, it will be seen, has as yet been drawn from the Treasury. The remaining \$10,000 has, however, been appropriated by your Board, and will be drawn and applied accordingly.

The period embraced in this report has been, in spite of severe trials to which the College has been subjected, one of great prosperity and success, as already indicated. I shall be disappointed if, with reasonable freedom from distracting influences, and a continuance of the fostering care of the three Boards of Trust interested, it does not hereafter advance still more rapidly in usefulness and honor.

Respectfully submitted,

EBEN S. STEARNS,

*Chancellor University of Nashville,
and President State Normal College.*

NASHVILLE, Dec. 31, 1884.

(APPENDIX A.)

**TABULATED STATEMENT of Receipts from State Appropriation and
Expenditure of the same.**

Nov. 1, 1883. Balance from former appropriation.....	\$ 347 33
Nov. 1, 1883. Received from State of Tennessee.....	2,500 00
Feb. 5, 1884. Received from State of Tennessee.	2,500 00
May 3, 1884. Received from State of Tennessee	2,500 00
Sept. 27, 1884. Received from State of Tennessee.....	2,500 00

\$10,347 33

Amount expended to Dec. 31, 1884.. 10,045 19

Balance.....\$ 302 14

EXPENDITURES IN DETAIL.

For Salaries.....	\$2,710 25
For Lectures.....	740 00
For Books.....	211 72
For Printing and Advertising.	452 65
For Fuel.	377 50
For Lightning-rods.....	190 50
For Gymnasium and Apparatus.....	2,086 82
For Laboratory etc.....	1,498 32
For Repairs.....	1,066 43
For Grounds, Paths, etc.....	616 50
For Miscellaneous.....	94 50

Total.....\$10,045 19

Itemized statements with vouchers have been duly presented and are in the hands of the Governor. Ten thousand three hundred and two dollars and fourteen cents of the entire appropriation has been appropriated by the Board, but not yet drawn from the treasury.

(APPENDIX B.)

BOARD OF HEALTH AND COMFORT.

(Established March 10, 1882.)

CONSTITUTION AND BY-LAWS.

A Board of Health and Comfort for the benefit of Students of the Normal College has been constituted.

OBJECT.

Its object is the promotion of good health and comfort among the students, especially in the class rooms.

OF WHOM IT CONSISTS.

Said Board of Health and Comfort shall consist of one student chosen from among the gentlemen, by ballot, in each class-room, as soon as possible, after commencement of each term ; such students shall be selected with special reference to supposed fitness for the office, and shall be responsible for the temperature and ventilation of the respective rooms.

ORGANIZATION.

As soon as may be after said election, the President of College shall call a meeting of the persons elected who shall proceed to choose by ballot one of their members to preside at all meetings of the board ; also a secretary in same manner. In all cases a plurality shall elect.

OFFICERS.

The President shall preside at all meetings of the board and perform such other duties as commonly belong to that office. The Secretary shall keep an accurate record of all meetings of the board ; of all subjects brought before the board, and of all its transactions. At the close of his term of office, he shall give all records and papers into the hands of the President of the College for safe keeping.

These officers shall hold their office until others are chosen in their place.

DUTIES.

It shall be the duty of each health officer to qualify himself as soon as possible after election, by making himself thoroughly acquainted with the methods by which the room in his charge is warmed and ventilated, and the general principles of warming and ventilation as applied to the promotion of the health and comfort of the students, as he can ; and these methods and principles are to be brought up and studied at every meeting until understood by every member.

The entire charge of radiators, registers, windows, thermometers, etc., is to be given to the officer of the room, and no other student is to be allowed at any time, either during sessions or before or after, to interfere with them.

Every such officer shall, once or twice, at least during each session, go where he can fill his lungs with pure air, and on returning to his room thus ascertain the condition of it.

The Board of Health and Comfort may, from time to time, appoint one of their members to bring before the students of the College, and discuss in the form of lecture or essay, any topic connected with the duties of their office, said lecture or essay having been read before the whole board and approved by them. Meetings for this purpose shall be called in consultation with and by consent of the President of the College.

Every officer shall have the right to ask advice of the board in respect to the duties required of him.

This Constitution and Regulations shall be carefully read before the board at the opening of each session, and great pains shall be taken to instruct new members in the duties of their office.

The Board of Health and Comfort shall bring to the notice of the Chancellor of the University any other matter, in which the health and comfort of students are concerned, which they may think requires attention.

The board shall also take charge of the Chapel, and inspect the ventilation, etc., and of any other place where public meetings of the College may be held, and shall detail one or more of their members for that purpose.

APPEALS, ETC.

Every student who feels aggrieved by the manner in which the officer of his room performs, or neglects his duties, shall be accorded a patient and respectful hearing by said officer, who shall, if in his judgment such a course is consistent with a due regard for the welfare of the room, accede to his wishes, but if the student aggrieved is not satisfied, he may appeal to the whole board, in which case the appeal must be in writing and the board shall act thereon without further delay. Should the board fail to give satisfaction, a further appeal may be taken to the President of the college before whom all parties shall be heard.

MEETINGS.

A regular meeting of the board shall be held on the first Monday of each month of the annual session, from 9 o'clock to 10 o'clock A. M., which every member shall attend promptly and regularly, as on all other college duties.

Other meetings of the board may be called whenever the President deems that the public good requires it.

The President of the College or Chancellor of the University shall be *ex-officio*, a member of the board and may be present and give his views on any subject connected with the duties of the board, at any time.

No additions to or change in the rules, etc., shall be made without the sanction of the President of the College.

COLORED NORMAL SCHOLARSHIPS.

Tennessee has a people within a people, and the organic law of the Commonwealth requires the public authorities to make equal though separate provisions for the educational wants of each race. Here again the State has been singularly fortunate in receiving most liberal help from Christian philanthropists outside. Six well furnished colleges for educating colored people have been established in different quarters of the State.

The statement given below furnishes all the particulars likely to be required. The State Board of Education, together with the Superintendent of Public Instruction, make the rules and regulations governing the colored normal scholarships.

COLORED NORMAL SCHOLARSHIPS.

Senatorial District.	NAMES.	SCHOOL SELECTED.	SENATORS.
1	{ Beverly V. Burchett, Martha Bryant,	{ Central Tennessee College, Roger Williams University,	{ John M. Simerl .
2	{ Lucas F. Mitchell. Nannie B. Joyce,	{ Knoxville College, Central Tennessee College,	{ Wm. Greene.
3	{ John E. Knox, Alice Crawford,	{ Roger Williams University, Central Tennessee College,	{ H. M. Sherwood.
4	{ Geo. W. Buchanan, S. A. Forbes,	{ Central Tennessee College, Roger Williams University,	{ J. H. Agee.
5	{ L. W. Douthit, G. W. Deadrick,	{ Knoxville College, Knoxville College,	{ E. W. Adkins.
6	{ John P. Crawford, S. N. Brown,	{ Central Tennessee College, Fisk University,	{ W. H. Dawson.
7	{ T. J. Callaway, James M. Bate,	{ Fisk University, Roger Williams University,	{ John G. Carter.
8	{ John B. Batte, M. J. Hurd,	{ Central Tennessee College, Fisk University,	{ H. L. W. Raulston.
9	{ Willis M. Ayres, Geo. B. Sanders,	{ Roger Williams University, Central Tennessee College,	{ T. J. R. Swafford.
10	{ Rosana D. Spears, Ellen Northcut,	{ Central Tennessee College, Knoxville College.	{ M. D. Smallman.
11	{ Tandy Mitchell, Mary Marchbanks,	{ Roger Williams University, Central Tennessee College,	{ H. M. Colquitt.
12	{ J. E. Branham, James Bryant,	{ Roger Williams University, Central Tennessee College,	{ J. W. Blackmore.
13	{ J. R. McCall, M. G. McCall,	{ Fisk University. Fisk University,	{ R. E. Thompson.
14	{ J. M. Sublett, Rosetta King,	{ Fisk University, Fisk University,	{ B. F. Alexander.
15	{ L. B. Talley, S. W. Anderson,	{ Fisk University, Roger Williams University,	{ John W. Steele.
16	{ Eli Woodard, R. B. Reynold,	{ Fisk University, Central Tennessee College,	{ D. S. McCullough.
17	{ R. F. Boyd, B. A. J. Nixon,	{ Central Tennessee College, Central Tennessee College,	{ E. Edmundson.
18	{ Albert J. Collins, Ella J. Collins,	{ Roger Williams University, Roger Williams University,	{ John T. Williamson.
19	{ Mary Knowles, Aurelia Bryant,	{ Central Tennessee College, Central Tennessee College.	{ M. Burns.
20	{ Evelina Busby, Olive J. Lischy,	{ Central Tennessee College, Fisk University,	{ T. L. Dodd.
21	{ Robert L. Yancey, Jesse Fine,	{ Fisk University, Fisk University,	{ W. M. Daniel.
22	{ Thomas Miller, John F. Moreland,	{ Central Tennessee College, Central Tennessee College,	{ V. F. Bibb.
23	{ A. T. Ayres, Hannah M. Banks,	{ Roger Williams University, Roger Williams University,	{ E. D. Patterson.
24	{ T. B. Harris, Eli Taylor,	{ Fisk University, Fisk University,	{ Jesse Norment.
25	{ T. M. Stegall, Robert G. Johnson,	{ Central Tennessee College, Roger Williams University,	{ John Y. Keith.
26	{ E. M. Bramlitte, A. T. Morrell,	{ Fisk University, Fisk University,	{ James P. Wilson.

COLORED NORMAL SCHOLARSHIPS—CONTINUED.

Senatorial District.	NAMES.	SCHOOL SELECTED.	SENATORS.
27	{ Florence Palmer,	Central Tennessee College,	S. A. Champion.
	{ Henry H. Manning,	Central Tennessee College,	
28	{ W. S. Sherill,	Central Tennessee College,	B. B. Watkins.
	{ Annie E. Draper,	Central Tennessee College,	
	{ Albert Cochran,	Central Tennessee College,	J. S. Cooper.
29	{ J. B. Palmer,	Roger Williams University,	
	{ H. S. H. Boykin,	Roger Williams University,	I. A. Nunn.
30	{ S. H. C. Owens,	Roger Williams University,	
	{ J. A. Midget,	Roger Williams University,	H. R. Sherrod.
	{ C. E. Young,	Roger Williams University,	
31	{ D. R. Fields,	Central Tennessee College,	D. T. Porter
	{ Fannie Green,	Central Tennessee College,	
	{ J. L. Yarborough,	Roger Williams University,	J. S. Galloway.
32	{ J. R. Glasten,	Roger Williams University,	
	{ H. J. Wardlaw,	Roger Williams University,	
33	{ Lovetta Green,	Central Tennessee College,	
	{ A. O. Coffin,	Fisk University,	

In reviewing the whole field, the Board would state that all the scholars, whether white or colored, have the benefit of competent teachers, and of institutions with buildings and equipment which entitle them to rank in the first class.

The State Normal College has been repeatedly inspected by members of the Board of Education. No expenditures have been made without the previous consent of the Board. No bills have been paid unless first carefully examined and approved by the auditing committee, through its chairman, the Governor.

Tennessee has several first-class normal colleges, training each year more than one hundred and sixty Tennesseans for service in our public schools, at less cost per annum than New York or Illinois expend on the current expenses of a single one of their normal colleges.

All of which is respectfully submitted, in behalf of the Board, by

J. BERRIEN LINDSLEY,

Secretary.

SCHOOL HYGIENE.

I make the following extracts from the valuable report of Dr. Daniel F. Wright, M. D., member of the State Board of Health and Chairman of the Committee on School Hygiene. These extracts are very suggestive, and I hope will prove of much benefit to the teachers of Tennessee:

THE SCHOOL MACHINE WORRY.

But there is another mode of competition which affects those rather lower down in the scale, and some of them more profoundly, perhaps, than the class above described; at least a larger number are brought under its influence. I speak of the incessant push to keep scholars up with the studies of their grades, which they have to do under penalty of falling to a lower grade. This peculiar stimulus takes effect upon a larger number than any other, and is, in fact, the chief motor-power which keeps the whole in motion. It differs from that previously described in this, that the exciting motive in the one is the hope of getting ahead, in the other the fear of falling behind—of losing grade, in short. Now, hope is an elevating agency, fear a depressing one. Here comes in that peculiar state of mind, now thoroughly recognized by nervous pathologists, called by them worry. It was first used, I believe, by Forbes Winslow, in reference to numerous cases of *dementia* occurring among business men. It was shown that, in most such cases, it was not overexertion that produced insanity, or at least not that alone, but excessive labor under depressing circumstances—overwork, with fear and despair in the back-ground; thus, while business is prosperous, a healthy man can get through an astonishing amount of work without injury, but let the affairs become involved with daily increasing complications ominous of failure, and let the business increase its exactions on the overwrought brain, while hope gives way to fore-

boding and foreboding to dread and dread to despair—then the harassed brain gives way under the double burden of work and despondency, and our lunatic asylums are full of *worry* so produced. *Worry*, then, is the prevailing trouble of large schools in which the machine is worked with vigor and energy characteristic of the modern public school system. A boy finds himself literally part of a great machine there, a single cog of a single wheel, perhaps, but the machine works on and he must work with it or be crushed by it; he feels that he must keep up with the machine and make his grade, and he feels every day less able to do so; failure implies disgrace, loss of self-respect and self-confidence, grieved and, perhaps, angry parents, the jeers of school-fellows; he redoubles his efforts and goes home with headache—ultimately sickness compels him to desist, he loses days, perhaps weeks, and finally the grade. Fortunate is he if no more permanent injury is done to a nervous system subject to such tension. Added to all these mortifications is an undefined sense of injury; he feels that he is not less intelligent than those who trample him down in the race, he can't tell why, and he is right, for it is not the stupid and naturally defective alone who fail under this trial; frequently the beaten scholar has a better mind than he who walks over him. At the risk of prolixity, I must here distinguish two types of youthful intellect not sufficiently discriminated between in school practice—they are the perceptive and reflective types. The perceptive boy catches an idea quickly, retains it well, and applies it promptly; he is bright and active in school and at play; the machine works well with him, and his advance is rapid; his teacher makes a brag scholar of him—but his is not the best mind there. The reflective boy does not take it in so quickly, from the very fact that as the seed falls in deeper soil it takes it longer to sprout; his quicker rival sees a thing at once, if he sees it at all; the reflective boy has to reason it out, and this takes time; the machine cannot stop for all this; he is passed over, and, as this takes place frequently, he is gradually recognized as the stupid boy of the class. The effect on the boy himself depends upon his nervous organization; if it is sensitive and irritable, he wears himself out with futile efforts to keep up; if it is less impressible, he gradually subsides with a sullen contentedness into the stupid boy's place, falling grade after grade, until his friends conclude his case to be hopeless, and put him at work they hope he can do. But stupid boys of this sort have become

some of our greatest men. Sir Isaac Newton, Sir Walter Scott, and hosts of other men, illustrious for intellect, were recognized as stupid boys at school, and the phenomenon has been often stated and wondered at, that, in so many cases, stupid school boys have become men of vast intellectual power. The solution is that, not they but their teachers were stupid in not recognizing a type of intellect which required other than machine methods for its development.

But it is not with those who have survived the blunders of their school treatment and become great men that I am now concerned. It is those who have more excitable nerves and a less stalwart frame, whose nerves have been torn to pieces by the inexorable working of the machine, and whose spirit it cowed by repeated failure, that are the victims of the machine. I am not writing from theory, but from observation. I have not only been engaged in education myself in early life, but I have been for several years a member of the Board of Education, in Clarksville, where the public schools are among the best in Tennessee, and the system of instruction includes all the modern improvements. As a part of the duties of that office, I have practiced a constant inspection of the schools while at work, and familiarized myself with the methods of teaching and discipline and their results.

And what are these results? Alas! I cannot give statistics for them, for such results have never been tabulated, and cannot be tabulated; they are read in their effects in after life, producing helpless, hysterical women, and feeble, irritable men, producing neuralgia, and as their extreme results, epilepsy, insanity and idiocy. I am conscious that this will be looked upon as exaggeration, and I have no remedy for that impression, though I am certain that it is within the truth. One fact, however, I can state: In the grammar department of the schools I have mentioned, consisting of a number of scholars varying from 120 to over 200, five cases of chorea occurred during the session which closed last June. The cases yielded readily to treatment while the patients were removed from the school, but the malady always returned if they returned to their desks. Now, it will be said that five cases out of two hundred scholars is not a very serious amount of disease, but I take it as a test of the tendencies of the school system. M. Rufz, in the French Dictionary of Medicine, finds 189 cases of choera out of 32,976 chil-

dren admitted to the children's hospital of Paris ; this is an average of one and one-tenth per cent. *on the whole number of sick children*, while the school in question gives an average of two and a half per cent. out of all sorts—sick and well. Granted, then, that our five cases out of two hundred is not a very serious matter (though the parents of these five probably think otherwise), the occurrence of these cases is a test phenomenon which makes it certain that a vast amount of nervous trouble must prevail there of a less grave and conspicuous character.

[The body of this report was necessarily written before reports could be received from other schools in Tennessee, which will account for our observations being limited to the schools of one moderate size town. These schools are admitted, however, to be among the best regulated in the State.]

I cannot dismiss this portion of my subject without calling attention to the effects of this storm and stress in our school system upon the teachers as well as the scholars. Let it be remembered that almost all the teachers in our public schools, except the superintendents, are now females. I believe it will be found that a truly healthy person among them is the exception, rather than the rule; at least if the observation is made in June, toward the close of the session's work. Nor can it be considered an accidental coincidence that, in this State, an ex-State superintendent and the existing superintendent of the largest city schools in the State are palsied men.

I fear that boards of education limit their idea of their duty too much to the one purpose of getting the largest amount of work out of their employes at the lowest possible price. So narrow a method as this defeats its own purpose ; a system which thus squanders the health and energy of teachers can never be advantageous to the pupils ; the self-possession and tranquility of mind which are essential to the qualification of a good teacher are entirely incompatible with the harrassed and exhausted nervous systems which are the inevitable consequence of our machine system of education. Exhausted nerves are irritable nerves, and irritability is the worst defect a teacher can have. Let our school directors, therefore, reflect that a hard bargain with their teachers is a still harder bargain with their children.

THE REMEDY.

But readers will, long ere this, have begun to profound the ques-

tion, what is your remedy? What do you want done? Such questions are always very difficult to answer, and in this case a complete remedy would be tantamount to a revolution in our public school system; for the errors out of which all these evils spring may be comprised under two heads:

First—Not enough teachers for the number of scholars.

Second—Too much teaching crowded into too short a time.

1. Children cannot be taught in great masses except by general rules; in other words, by machine methods. What we have been endeavoring to show is that the evils in our methods arise from a want of discrimination, what answers for a majority crushes a minority; discrimination is needed between boys and girls, after a certain age, and between boys of a different mental type. But a teacher who has from fifty to seventy-five scholars to teach cannot discriminate, and, in our very best schools, many have at times more on their hands than that. One teacher to fifty-six scholars seems to be the proportion agreed upon for public schools North and South, and I have not the least doubt that one in forty would furnish as much as one teacher could attend to with good results to both teacher and pupil. But can this be furnished? Not under existing arrangements without larger appropriations, and I have practical knowledge of the difficulty of getting city and county authorities to consent even to the existing school taxes. I fear it will be many years before an increase will obtain consideration.

I can only point out the evil, therefore; to suggest the remedy would be to overhaul the whole fabric of our existing school system, which would be out of place in the present reports.

INFECTIOUS DISEASES.

The laws of Tennessee already forbid the attendance of children suffering under infectious diseases at public schools; it was probably by an oversight that they failed to require vaccination as a condition of attendance in all cases where the child had not had small-pox or variola. This board would, I respectfully submit, do well to urge the addition of such a provision; many of our city schools have a municipal ordinance to that effect, and I have seen it work well beyond the limits of the school, when enforced, by calling general attention to the matter, and so bringing about general vaccination throughout a community.

But there is a class of diseases not properly speaking infectious, the spreading of which should be provided against in schools; they are not propagated by infection, but by imitation. These are the nervous affections, epilepsy, chorea and hysteria. Where any one of these occurs, the patient ought to be instantly removed from the sight of the other pupils, or the same disease will be very likely excited in some of them.

Stammering is a nervous disease, seldom acquired elsewhere than at school, and it is acquired there in two ways, by imitation and by impatient, irritating treatment in class. Of course, a child should not be excluded for so slight a cause as this, but the acquisition of the habit can be prevented, and the habit itself cured in its inceptive stage, by care and patience on the part of the teacher. The first time a child commences a stuttering answer in class, he should be stopped gently and kindly, told to collect his thoughts and not speak till he is quite ready with what he has to say; above all, other pupils should not be allowed to prompt or correct him until he has either succeeded or failed without interruption. After first stopping him, he should be asked whether he understands the question, and if not, it should be repeated and explained, and then the pupil told to take his time about it, and, if the habit has not been fully formed, he will probably answer without a stutter. On the other hand, a little impatience on the part of the teacher on such occasions will go far to establish stammering, first as a habit, and afterwards as a disease, liable to last for life.

HYGIENE OF THE SCHOOL BUILDING AND PREMISES.

The great body of reports like the present is generally occupied with the treatment of this subject. I do not follow the example. Most of the topics discussed under this head belong to general hygiene, and should be discussed in that department. Thus, much is generally said about the drainage and sewerage of school premises. On this I have only to say that the efficiency of these depends very largely upon the sewerage and drainage of the town in which the schools are placed. If the general arrangements for these purposes are bad, those of the school cannot be good. On this head, then, nothing need be said, except that the privies ought to be placed at a sufficient distance from the school-house, and from the cistern or other provisions for water supply (at least fifty feet from either),

and that the surface-water should be prevented from penetrating to the cellar. Of the interior of the building, something must be said in reference to ventilation and lighting; in other words, to matters affecting the respiration and visual powers of the inmates.

RESPIRATION.

It has been the custom in works on architectural hygiene to prescribe the number of cubic feet to be occupied by a given number of inmates; more recently, and more philosophically, it has been made the criterion that the whole mass of the air in a room occupied by many people should be capable of being frequently changed. The calculation is received that a minimum of 2,000 feet for every inmate should be entirely removed and replaced by fresh air every hour; and very complicated apparatus has been invented for the purpose of effecting this, far beyond the reach of public schools in Tennessee. To show the impracticability of this, I have made a calculation of what this would imply in a school-room under my observation. The room is 55 by 35 feet, and 14 feet high, which gives:

Cubic dimension of room 26,950

*Mass of air to be changed per hour 200,000

* I assume the room to be occupied by 100 pupils; unfortunately, it in fact contains nearly 200, at times.

Dividing the latter number by the former, we get a quotient of between 7 and 8; in other words, the whole mass of the air in the room would have to be changed between seven and eight times an hour to fulfill the above requirements. There is certainly not a building in Tennessee, for school or any other purposes, in which this could be done, and probably not many in the United States. Booth's theater has probably effected this at an enormous expense, being considered a miracle of sanitary contrivance—a powerful steam engine is kept at work for the purpose during performances.

Instead of prescribing impracticable things, therefore, I will present some practicable suggestions for doing the best with more or less defective arrangements.

I. Let every window be constructed so that it can be opened at top as well as bottom. This, in winter time, will enable communication with the outer air without bringing a draft upon the inmates. In every heated room the air has an upward motion, on account of the greater rarity of hot than cold air. But,

II. This motion will not be sufficient to exchange any considerable quantity of air, unless air is admitted from below as fast as it can be removed from above. Here comes the difficulty of avoiding injurious drafts. The desideratum is to admit air which is warm as well as fresh. Where the room is heated with hot air from a furnace in the basement, let the furnace-room communicate freely with the external air, which will be warmed by contact with the furnace, and let this warmed air be admitted to the school-room through perforated metal plates in the floor. [I take it for granted that in this case the basement will not be used as an urinarium, though I have known of such outrages.]

III. Let the room be, several times a day, emptied of pupils long enough for all the windows to be thrown open, and complete ventilation effected. I think this can be carried out with less loss of time than might be supposed. Thus, in graded schools, there is always a movement, once in a half hour, of scholars from the recitation room to the hall and *vice versa*. Now let this movement once an hour be made by a detour out of the room and round the playground two or three times, and while this is going on, let two or three pupils be detailed to open the windows at one tap of a bell, and close them at a second, say five minutes afterward, and let the second tap be the signal for the return of the pupils to the building, and to their several destinations. The great ingenuity of modern public-school teachers could, I am quite sure, effect this without the loss of more than five minutes additional to that now consumed, and that five minutes in time would be more than compensated by the increased alacrity caused by the inhalation of that much oxygen.

Contrivances of this sort, which could be largely supplemented by the intelligence of teachers, once directed to the subject, would go far to counteract very defective arrangements for ventilation in the building.

LIGHTING—EFFECTS ON VISION.

Strabismus and *miopia*, in other words, squinting and near-sightedness, are diseases very generally acquired at school ; a few words, therefore, must be said as to precautionary measures against them.

Near-sightedness is acquired by too great a strain on those minute muscles which adapt the eye to different distances, as well as to those which regulate the quantity of light admitted into the interior

of the organ. It is therefore promoted by looking at objects too small, or too far off for distinct vision. Hence, the distance of the blackboard and the size of the letters written on it; the position of the book on the desk, and the quantity of light thrown upon it, have much to do with the hygiene of the eye.

The blackboard should not have a shining surface, and all writing on it should be large enough to be read without effort or straining by every member of the class. It ought to be directly in front of the pupils, and its surface kept clean, so that there may be sufficient contrast between the chalk and the board.

The desk at which the pupil studies should be inclined at such an angle that the line from his eye to the middle of his book should strike the surface of the book at right angles. Most of the desks I have examined are not, I think, sufficiently inclined for this; indeed, every peculiarity of vision requires a different angle. The ingenuity of manufacturers of school furniture would be well applied in inventing a school-desk with an adjustable top, in which the angle could be adapted to the vision of each scholar.

Light should be so supplied, as that it is diffused equally in all parts of the room, no pupil getting more or less than another, and none being exposed to the direct rays of the sun. Of course, this can be only approximately effected. It has been advised that it should come from only one side of the room, and that to the left of the pupil; but this arrangement is fatal to the equal diffusion of light; it will always cause a light side and a dark side in the school-room. The principal light should come from the pupil's left, and, if possible, from the north, which would obviate the falling of the sunshine directly on the pupil's eyes.

Windows may admit light in any other direction except in front of the pupil, preference being given to the west, which is behind him, and the south, which is on his right; but blinds should be carefully adjusted on that side, so as to exclude the direct rays of the sun.

The only direction from which light should always be excluded is in front of the scholars, which, according to the above, would be east. As there is not always a choice of directions, I would recommend as the best, when attainable, light from the left and from behind; the former from the north and the latter from the west.

A white-washed ceiling aids much in equalizing the diffusion of

light; but the walls should never be white, which is very trying to the eyes. A bluish gray, or a pale olive green, are restful colors desirable for them.

Strabismus, or squinting, is promoted by any cause which tends to exercise one eye more than the other, as receiving light from only one side, having the blackboard on one side instead of in front, both of which errors have already been pointed out; but a much more fruitful cause of it is brain exhaustion from the many forms of overexcitement treated of in the early parts of this report; such exhaustion leads to local disease in the brain, paralyzing one or more of the muscles which move the eyeball.

I will, therefore, conclude here with recapitulating the leading reforms which I consider should be aimed at.

First: To separate the treatment of very young children entirely from the general system, assigning them to ladies who combine the qualities of a tender mother with those of an enlightened teacher.

Second: To increase the number of teachers in proportion to that of pupils, so as to render some discrimination possible, some attention to diversity of character.

Third: To lengthen the recess and provide opportunity for systematic bodily exercise.

Fourth: To separate the sexes after the age of thirteen.

POSTSCRIPT.—Dr. Crichton Brown states, as his starting point, the large increase in the number of suicides in England, showing that, within the present century, their percentage of the whole population has quintupled, and that a very considerable item in this increasement is referable to juvenile suicides, including those under sixteen years of age. He also cites the statistics of insanity, showing that 43,346 patients have been added to the number of registered lunatics within the last twenty years, which is just the length of time since public education became general in England.

This portentous array of facts he accounts for by what he observed in the schools above mentioned. The following may be taken as a sample of these observations:

"It is now certain that more than one-third of the children attending elementary schools in London suffer from habitual headache. I have examined 6,580 children in elementary schools in London on the subject of headaches, and have found that 3,034, or 46.1 per cent. profess to suffer from them habitually. Great pains were taken to secure accurate returns. In one school containing 381 boys, 129 were sleep-talkers and twenty-eight sleep-walkers, this being a school in which home lessons were insisted upon. In a school of 432 girls, there were seventeen somnambulists, and in another of 382, there were twenty. Tabulated statistics shew, furthermore, that 53.4 per cent. of the boys, and fifty-five per cent. of the girls, suffer from neuralgia and tooth-ache; and short-sightedness increases so rapidly that it threatens to become a national infirmity, as in Germany. A remarkable contrast to this state of affairs is offered in the schools of Scotland. Only twenty-three children (nine boys and fourteen girls) out of 335 complained of headaches, which gives a percentage of 6.5 against 46.1 for London. One child, a nervous girl, out of the 335, complained of sleeplessness, and there was just one instance of short-sightedness, while not a somnambulist was to be found; the reason being that they are well fed on porridge and milk as the staple articles of diet, with broth, potatoes, butter, tea, and occasionally a bit of meat or bacon. They are warmly clad, and wear stout clogs in winter and go barefooted in summer. They are much in the open and uncontaminated air."

It ought to be stated, however, that in London starvation is specified as one of the conditions which render this overpressure fatal; in fact he enumerated three types of children who cannot bear it, the dull, the starved, and the delicate.

Happily starvation is not an appreciable element of mischief in Tennessee, and dullness is the exception, but delicacy of constitution is much more prevalent among our children than it is further north, especially among children of intellectual tastes and sensitive temperaments.

RULES OF GOVERNMENT AND COURSES OF STUDY

FOR

GRADED SCHOOLS.

The following Course of Study and Rules for the Government of the Schools in the Second District of Knox County are inserted for the benefit of District Directors throughout the State who may desire to grade their schools:

To the Patrons of the Public Schools of the Second District of Knox County, Tennessee:

The Board of School Directors of your District, earnestly desiring to promote the educational interests under their charge, have published a system for grading the schools of the District, and rules for their government.

There can be but one opinion entertained by intelligent observers in regard to the necessity of reform in the management and control of our schools. For years they have been without *prescribed* course of study. It is true that the law prescribes *what* shall be taught in the schools, but as it does not enter into the details of school management, but leaves them to the School Directors, it has heretofore been considered that the law was complied with if the branches required by it were taught, some to one and others to others, in the same school! Thus, under this management, each pupil was allowed to study to a considerable extent the branches only which suited his or her fancy, and consequently many of our pupils know comparatively nothing of some branches, whilst they are perhaps advanced in others; and it is considered that the *letter* of the law, at least, has been observed, whilst, certainly, the *intent* of the law has been

grossly disregarded, to the great detriment of the pupils. Pupils taught under this want of system have, on entering higher schools properly conducted, found, to their great mortification, that they were compelled to begin again at the bottom of the ladder; others, on entering the duties of life, find, to their dismay, that they are far short of the desired mark. Under this want of system, pupils make, very frequently, but very poor progress in even what they study. There being no prescribed course to study, no examinations to undergo, and consequently no record of each pupil's proficiency, each succeeding teacher requires his pupils to begin their studies at the points of their text books that may *strike* the teacher as proper, until (if he be a good and conscientious teacher) he or she has the time to acquire a knowledge of the proficiency of the pupils, when they will be classed according to the teacher's judgment. Thus, perhaps, from one to four weeks of the time of the school is consumed, and very little done. Then, what if the teacher is negligent, incompetent or lazy! How many pupils have been placed back in their text books and required to go over, time and again, the same studies uselessly? How many pupils have had their aspirations crushed by this course?

Again, the government of the schools being left altogether with teachers, without any rules prescribed by any authority to guide them, we have had for results: some teachers who were charged with being too "tight," and others with being too "loose;" some schools, perhaps, models of good order, and others, examples of confusion; the results being too much in conformity with the teacher's temper or his natural inclinations, and not according to the dictates of reason.

These, and other evils connected with our schools, ought certainly be corrected. Our school sessions are already too short, and we cannot afford to lose, through their mismanagement, the benefits we are entitled to derive from them. They are supported by taxes raised from the people, and which you pay from the earnings of honest, hard labor—from earnings obtained by the sweat of your brows—and it is our duty, as public officers, to see that this money be not expended uselessly. For this reason we have put forth the plan for the management of our schools, which we present you now.

The plan we present may perhaps not please *every one*. That we cannot expect. But we sincerely believe that what we have done

was absolutely necessary, and we did it for the "public good." Therefore, we ask your cordial support for the measures we have adopted. We ask for these measures the co-operation of every parent and pupil in the district. All our teachers, whom we have consulted in this matter, have nobly promised their co-operation to carry out our plan, and we trust we can also rely on both parents and pupils, and that they will cheerfully comply with what is required for their good.

Respectfully,

For the Board of School Directors of the Second District

A. BUFFAT,

SEPTEMBER 1, 1883.

Clerk.

Course of Study and Rules for the Government of the Schools of the Second District of Knox County, Tenn.

The Board of School Directors, of the Second District of Knox County, Tennessee, announce the following as the plan according to which the schools of the District shall be graded or classified; also prescribe the following rules for their government:

COURSE OF STUDY.

Pupils attending the schools of the Second District shall be classed, according to their degrees of proficiency, into *seven* grades, and the course of study shall be as follows:

FIRST GRADE.

Pupils shall be taught from the First Reader and the Chart, letters of the alphabet, print and script. Spelling and reading, punctuation marks, distinguishing capitals.

Writing—Copying on slates, letters, both print and script, short words, punctuation marks, Arabic and Roman figures.

Arithmetic—Computation of numbers by the five fundamental rules to 10; Roman figures to XII.

Geography—The cardinal points, to point the same on maps, distinguishing on wall-maps lands, oceans, rivers and mountains.

Object Lessons.

SECOND GRADE.

Pupils shall be taught spelling, oral and written.

Reading and use of punctuation.

Writing on slates; copying of sentences.

Arithmetic—Computation of numbers by the five fundamental rules to 25; Roman enumeration to L; multiplication table to 5 times 12.

Grammar—To point out nouns and verbs in sentences of reading lessons.

Geography—The cardinal and semi-cardinal points, grand divisions of land and water, poles, equator, zones, degrees of longitude and degrees of latitude.

THIRD GRADE.

Pupils shall be taught spelling, oral and written.

Reading and punctuation.

Writing—On copy books, with pen and ink, copying sentences.

Arithmetic—New American, part 1st, complete; multiplication table completed; Roman notation and enumeration to C; black-board exercises.

Grammar—Pointing out adjectives and adverbs, and making practical applications of them.

Geography—Mitchell's First Lessons in Geography, complete; wall-map exercises.

FOURTH GRADE.

Pupils shall be taught spelling, oral and written.

Reading—Fourth Reader; definition of words; punctuation.

Writing on copy books, with pen and ink; short descriptions of objects.

Arithmetic—Second American, through compound numbers, omitting fractions; blackboard exercises.

Grammar—To point out all parts of speech in reading lessons; write descriptions of objects.

Geography—Mitchell's Primary to page 63; wall-map exercise; map drawing.

FIFTH GRADE.

Pupils shall be taught spelling, oral and written; American Pronouncing Speller.

Reading—Fourth Reader ; definition of words ; punctuation.

Writing—Copies on paper, with pen and ink.

Arithmetic—Second New American Arithmetic; the fractions omitted in the Fourth Grade, and the book completed from compound numbers ; blackboard exercises.

Grammar—Clark's Brief, complete ; written descriptions of objects.

Geography—Mitchell's Primary completed ; exercises on wall-maps ; map drawing.

SIXTH GRADE.

Pupils shall be taught spelling, oral and written ; word analysis.

Reading—American Fifth Reader ; punctuation ; definition of words of reading lessons.

Writing—Copies on paper, with pen and ink.

Arithmetic—American Practical Arithmetic, from beginning to page 204 ; blackboard exercises.

Grammar—Clark's Practical, from beginning to Syntax ; compositions.

Declamation.

Geography—Mitchell's Intermediate, complete.

SEVENTH GRADE.

Pupils shall be taught spelling, oral and written ; word analysis ; definition of words.

Reading—Fifth Reader.

Writing—Copies with pen and ink.

Arithmetic—American Practical, completed ; blackboard exercises.

Grammar—Clark's Practical, completed.

Compositions and declamations.

History—Butler's History of the United States, complete.

Geology—Killebrew's Geology of Tennessee.

Agriculture—Elements of Agriculture, by Lupton.

SYSTEM OF PENMANSHIP.

The Spencerian system of penmanship shall be taught in the 3d, 4th, 5th, 6th and 7th grades, and shall be closely observed both in regard to the manner of holding the pen and in regard to the position of the body.

BOOKS REQUIRED FOR THE COURSE OF STUDY.

First Grade.—American First Reader.

Second Grade.—American Second Reader, American Primary Speller.

Third Grade.—American Third Reader, American Primary Speller, New American Arithmetic, part 1st, Mitchell's First Lessons in Geography ; also, pen, ink and copy books or paper.

Fourth Grade.—American Fourth Reader, American Pronouncing Speller, Second American Arithmetic, Mitchell's Primary Geography ; also, pen, ink and copy books or paper.

Fifth Grade.—American Fourth Reader, American Pronouncing Speller, Second American Arithmetic, Clark's Brief Grammar, Mitchell's Primary Geography ; also, pen, ink, copy book or paper.

Sixth Grade.—American Fifth Reader, Town's Word Analysis, American Practical Arithmetic, Clark's Practical Grammar, Mitchell's Intermediate Geography ; also, pen, ink, copy books or paper.

Seventh Grade.—American Fifth Reader, Town's Word Analysis, American Practical Arithmetic, Clark's Practical Grammar, Butler's History of the United States, Killebrew's Geology of Tennessee, Lupton's Elements of Agriculture ; also, pen, ink, copy books or paper.

All grades will require slates and pencils.

EXAMINATIONS AND PROMOTIONS.

1. There shall be one examination held at the close of each session of the schools.

2. This examination shall be conducted by the teachers in charge of their respective schools, under such regulations as the Board of Directors may prescribe. Written questions shall be furnished by the Board of Directors for these examinations. Answers in the 1st, 2d and 3d grades may be oral, but shall be recorded by the teacher. Written answers shall be required above the 3d grade.

3. An average, obtained at the examination, of seventy per cent. on the studies of the grade in which the pupil is examined, and not less than fifty on any one study of said grade, shall be required for promotion to a higher grade.

4. Teachers shall keep a correct record of all examinations, and deliver the same to the Clerk of the Board of Directors at the close

of the session of the school. They shall also enter upon the school registers, opposite each pupil's name, the grade to which the pupil belongs, and in which he or she studies.

5. Teachers shall, after the examination, at the close of the session of their schools, issue to each pupil, below the 7th grade, who attains at the said examination the required per cent. to entitle to promotion, a certificate, which shall certify the per cent. obtained by said pupil on each study, and also certify the grade into which the said pupil is entitled to enter (this being one grade higher than the one in which said pupil was examined), and the pupil shall be entitled to enter, at the next session of the school, into the grade designated in the certificate.

6. If any pupil, not provided with such certificate of grade from the Second District, or for whom no record of grade in the registers of the District School be known, applies for admission, such pupil shall be carefully examined, as soon as practicable, by the teacher, and assigned to the highest grade to which the pupil can be entitled by attaining the required per cent. of that grade.

7. Pupils who shall have completed the course of study, and whose records show *clearly* an average per cent. of seventy, on the studies required in the 7th grade, excepting geology and elements of agriculture, and a per cent. of fifty on these two studies, shall be entitled to a certificate of scholarship from the Board of School Directors; but if the record show not clearly to the satisfaction of the Board that such pupil is entitled to such certificate, then the Board may require a new examination of that pupil.

RULES OF GOVERNMENT.

1st. Teachers shall open their respective schools every school-day punctually at 8:15 A. M., and 12:45 P. M., and close them at 11:30 A. M. and at 4 P. M., meridian time, and shall give a recess of 15 minutes each, during the morning and evening sessions of their schools.

2d. Teachers shall be on the school grounds 15 minutes before the time of opening in the morning, and shall remain until the time of closing in the evening. They shall allow no pupils to loiter on the grounds after school hours.

3d. As soon after first opening their schools as possible, the

teachers shall assign their pupils to the grades to which their certificates or records may entitle them, and examine and assign to their proper grades the pupils who have no certificates of grade, nor record of grade in the District, and shall require pupils to study all the branches required for their respective grades, and do all in their power to induce pupils to provide themselves with the necessary text books.

4th. If any pupil fail to be provided with the text books necessary to pursue the studies required in the grade to which he or she may have been assigned, the teacher shall assign such pupil to a lower grade—to the highest below the one to which such pupil is entitled—and for which such pupil can furnish the necessary books.

5th. Teachers shall require at least one recitation or exercise every day in *written Spelling, Reading, Writing, Arithmetic and Grammar*, from every pupil belonging to the grades in which these studies are required, and shall require recitations and exercises in the other studies as frequently as practicable. No pupil shall be exempt from the writing exercises for want of proper material; but if not provided with pen, ink and paper, shall be required to write on a slate, and during this exercise the teacher shall require each pupil to hold his or her pen in the proper manner, and to observe the position of the body required by the Spencerian system of penmanship. All words in the spelling lessons incorrectly written shall receive proper notice, and be corrected.

6th. Teachers shall observe closely all the compositions written by pupils, and point out all errors of orthography, grammar and punctuation he may detect, and require their correction.

7th. Teachers shall also, as much as possible, observe the conversations of pupils, and call the attention of pupils to errors they may detect therein, and correct them.

8th. Teachers shall devote their whole time and attention to their schools, whilst on the school grounds, and shall maintain a strict discipline; shall observe and enforce the rules prescribed by the Board of Directors, and such rules that they may themselves prescribe in conformity thereto.

9th. No teacher shall suspend his or her school without the consent of the Board of School Directors, unless compelled by unavoidable circumstances, and in this event shall notify one of the School Directors of this suspension, and state the cause in writing.

10th. Teachers shall require pupils to sweep the school rooms when necessary ; they shall see to the proper ventilation of the school rooms, to their being properly warmed in cold weather. They shall report to the Directors such repairs as in their judgment their respective school-houses may need, and also report to the Directors the need of fuel at the proper time.

11th. Teachers shall pay especial attention to the prevention of the spread of contagious diseases in their schools. They shall not admit pupils recently exposed to the contagion of scarlet fever, diphtheria, small-pox, measles, or other contagious diseases, until two weeks after the discontinuance of such exposure ; and when in doubt in regard to admitting a pupil on account of such exposure, may require such pupil to obtain from a physician a certificate to prove his or her safety from communicating contagious diseases, before admitting such pupil.

12th. Teachers shall require pupils to be washed and combed before entering the school room, and shall do all in their power to inculcate habits of cleanliness and of good deportment in their pupils.

13th. Teachers may punish pupils when, in their judgment, it is absolutely necessary, but such punishment shall not be of a nature to inflict injury to the health of the pupil, and in no case shall teachers strike pupils on the head. Should parents or guardians of any pupil, however, object to the infliction of corporal punishment on their children or wards, they must make known their objections in writing to the teacher at an early period in the session of the school ; but such pupils may, for disobedience of rules, be excluded from school by the teachers.

14th. If any pupil persists in disobeying teachers, after reproof and punishment, the teacher shall notify the parents or guardian of the pupil of the misconduct of such pupil ; and if, after such notice, the pupil still persist in his or her misconduct, then the teacher shall, if the conduct of such pupil be injurious to the discipline of the school, suspend him or her from school.

Teachers may instantly suspend pupils from school in extreme cases of misconduct.

Teachers shall report all suspensions to the School Directors as soon as practicable, and state in writing the cause for such suspension.

No pupil shall, after suspension, be reinstated into the school unless by direction of the Board of School Directors.

15th. The chewing of tobacco or of gum in the school rooms, by either teachers or pupils, is *strictly forbidden*. Smoking, both in the school rooms and on the school grounds, by either teachers or pupils, is also *strictly forbidden*.

16th. Neither profane nor indecent language shall be allowed or tolerated on the school grounds nor in the school rooms.

17th. Neither fire-arms nor weapons of any kind, nor explosives or explosive material of any kind, shall be allowed to be brought on the school grounds.

18th. Pupils shall not inflict rude treatment on their fellow pupils, neither in play nor otherwise; nor shall they at any time throw stones on the school grounds.

19th. No play endangering the safety of the pupils shall be allowed, and all quarrelling among pupils on the school grounds shall be promptly quashed by the teacher.

20th. Pupils shall not deface, or in any way injure, school property.

21st. Pupils shall not leave the school grounds during school hours, without permission of the teacher.

22d. Pupils shall not talk aloud, or in any way be boistrous, in the school room, but shall enter and go out in a quiet manner, in the order the teacher may direct.

23d. Pupils shall not disturb the tranquility of the school room during the hours of study by unnecessary whispering, and shall not pass from seat to seat, nor walk about the school room during hours of study, except by direction or permission of the teacher.

24th. Pupils shall attend closely to their studies during school hours, and shall study all the branches required in the grades to which they belong, and devote the time to each study that the teachers may prescribe.

25th. Pupils shall observe these rules, and obey promptly all directions of their teachers, and be at all times respectful to them.

CITY SCHOOLS.

CHATTANOOGA CITY SCHOOLS.

Hon. Thos. H. Paine, State Supt. Pub. Inst., Nashville, Tenn.

DEAR SIR:—I have the honor to transmit herewith a summary of statistics of the Public Schools of Chattanooga, for the year ending July 31, 1884. Very respectfully,

H. D. WYATT,
Superintendent City Schools.

SUMMARY OF STATISTICS FOR SCHOOL YEAR ENDING JULY 31, 1884.

Population of city (census):—

No. white children, 6th to 21st July, 1884.....	2,754
No. colored children, 6th to 21st, July, 1884	1,787
Total enumeration 1884.....	4,541
Total enumeration 1883.....	3,929
No. different pupils enrolled (white)	1,942
No. different pupils enrolled (colored).....	1,104
Total enrollment.....	3,046
Highest monthly enrollment	2,406
Total number days present.....	312,467
Total number days absent.....	22,976½
Total number days belonging.....	335,443½
Number of school days taught.....	178
Average number belonging, 1884.....	51
Per cent. of attendance on number belonging	93.15
Per cent. of enrollment on enumeration.....	77.52
Cost of tuition per pupil belonging	\$11.22

Cost of tuition per pupil enrolled.....	6.98
Cost incidentals per pupil belonging.....	2.29
Cost incidentals per pupil enrolled.....	1.37
Total cost per pupil belonging, exclusive of permanent imp.	13.51
Total cost per pupil enrolled, exclusive of permanent imp.	8.35
No. school-houses belonging to city.....	
No. rented by city.....	
No. teachers employed, male.....	9
No. teachers employed, female.....	32
Total number employed.....	41

SALARIES.

Principals—maximum per month.....\$	150 00
Principals—minimum per month.....	88 88
Assistant, high school.....	80 00
Assistant, grammar schools.....	35 00 to \$60 00
Assistant, primary schools.....	35 00 to 60 00

An allowance of \$50 extra is made after five years' continued service.

MISCELLANEOUS.

A class of thirteen graduates from the high school.

Schools are divided into primary, grammar and high schools departments.

The school year consists of two terms; the first term four months, and the second term five.

FINANCIAL STATEMENT.**RECEIPTS.**

Balance cash on hand August 1, 1883.....\$	2,137 77
From State and County of Hamilton.....	8,000 00
From City of Chattanooga.....	18,500 00
From tuition.....	389 72—\$29,127 49

DISBURSEMENTS.

Salaries.....	\$22,091 32
Rent.....	609 35
Expense.....	1,463 08
Repairs.....	1,236 50
Fuel.....	418 23

Furniture.....	2,194 43	
Insurance	204 67	
Printing.....	74 55—	\$28,292 13
Paid debt of last year.....	186 60	
Total Expenditure.....		28,478 73
Balance surplus		648 76
Add warrants unrepresented for payment....		13 79
Cash in hand of Treasurer.....		662 55

Respectfully submitted,

H. D. WYATT,

CHATTANOOGA, TENN.

Superintendent City Schools.

CLARKSVILLE CITY SCHOOLS.

GENERAL STATISTICS.

Population of school district (1880).....	7,326
Population of school district from six to twenty-one.....	2,203
Different pupils enrolled (none re-entered).....	1,193
Average number belonging daily.....	824
Average number attending daily.....	780
Total number tardy.....	124
Per cent. of tardiness on attendance.....	0.07
Per cent. of enumeration on population.....	30.07
Per cent. of enrollment on population.....	16.28
Per cent. of enrollment on enumeration.....	54.15
Per cent. of attendance on enrollment.....	65.38
Per cent. of attendance on number belonging.....	95.79
Average per cent. of scholarship.....	75.50
Average age of pupils.....	12.9
Total number of days belonging.....	161,280
Total number of days present.....	154,499
Total number of days absent.....	67.85
Total number of days in session.....	200
Total number of days taught.....	198
Number of teachers.....	15
Number of pupils to the teacher.....	55

Cost of tuition per pupil enrolled.....	\$5.99
Cost of tuition per pupil belonging.....	\$8.68
Cost of tuition per pupil attending.....	\$9.17
Average salary paid teachers per annum.....	\$ 476.90
Total cost of tuition.....	7,153.50
Total incidental expense.....	662.59
Total annual cost.....	7,816.09
Number of school houses.....	2
Number of school rooms.....	6
Number of recitation rooms.....	12
Value of school houses.....	\$ 18,000
Value of school lots.....	6,000.
Value of school furniture.....	1,594
Total value of school property.....	25,594

C. TH. KELLOG, *Superintendent.*

JACKSON CITY SCHOOLS.

JACKSON, TENN., October 28, 1884.

Hon. Thomas H. Paine, State Superintendent Public Schools, Nashville, Tennessee :

DEAR SIR:—Enclosed you will please find reports of the City Schools of Jackson, Tenn., for the scholastic year, 1883–84 :

GENERAL STATISTICS.

Length of time taught in days.....	180
Average monthly salary paid teachers.....	\$ 38.00
Number of teachers.....	15
Total yearly expense of schools.....	\$9,626.62
School property.....	1,472.17
Incidentals, repairs, etc.....	1,999.66
Actual running expenses.....	6,152.45
Average yearly cost per pupil attending.....	9.60
Average yearly cost per pupil belonging.....	8.94
Average yearly cost per pupil enrolled.....	6.24
Average monthly expenses.....	905.80

Number of days present in white school.....	81,525
Number of days absent in white school.....	6,112
Number of days belonging in white school.....	87,637
Per cent. of attendance in white school.....	93
Number of days present in colored school	42,640
Number of days absent in colored school.. ..	3,124
Number of days belonging in colored school.....	45,764
Per cent. of attendance in colored school.....	93
Number of days present in white and colored school.....	124,165
Number of days absent in white and colored school.....	9,236
Number of days belonging in white and colored school...	133,401
Per cent. of attendance in white and colored school.....	93
Average number attending in white schools.....	454
Average number absent in white schools.....	33
Average number belonging in white schools.....	487
Average number attending in colored schools.....	237
Average number absent in colored schools.....	18
Average number belonging in colored schools.....	255
Average number attending in white and colored schools..	691
Average number absent in white and colored schools.....	51
Average number belonging in white and colored schools..	742
Scholastic population 15th District.....	2,506
Scholastic population in city.....	1,786
Total number enrolled in white school.....	686
Total number enrolled in colored school.....	375
Total yearly enrollment.....	1,061
Per cent. of attendance on enrollment.....	69
Per cent. of enrollment on scholastic population.....	62

VALUE OF BUILDINGS, ETC.

Long building	\$5,000.00
Reid building (granted free of rent).....	3,000.00
Benevolent Hall, annual rental	60.00
Henderson building, furniture, etc.....	2,000.00
School library.....	350.00

The city schools are the pride of the citizens of Jackson. If, at any time, they were considered, by any, as an experiment; that

thought has vanished, and it is now well known that they have come to stay.

We have a seating capacity for seventy pupils more than we had last year, and every seat has been taken. We have not a vacant seat.

Modern methods of instruction and government are used by all the teachers, and with perfect satisfaction.

I mention one thing in particular: Pupils are permitted to retire from the room at pleasure, and on returning they write on a card the time retired and time returned and sign name in full. The teacher collects these cards and makes a record of the same. No pupil has abused this privilege. Pupils are taught to do right from principle and not from fear.

We have in contemplation a new building, or rather the remodeling the one we now have, after the plan of the celebrated Howard School in the city of Nashville. This we trust will be consummated before the opening of schools next year.

At this writing, we are preparing an exhibit of our schools and school work for the Southern Exposition which meets in New Orleans, December next. Our exhibit will consist of written recitations and written examinations, photographs of each school room with the pupils at work, photographs of each building, also photographs of the teachers and members of the Board of Education.

The written work will be that done in actual work by each pupil in school, from the second grade to the eighth grade inclusive. The work of the first grade will be photographed from the slates. The colored schools and pupils receiving the same attention and representation of work done as the whites.

Yours truly,

FRANK M. SMITH, *Superintendent.*

JACKSON, TENN., December 2, 1884.

State Superintendent Thomas H. Paine, Nashville:

DEAR SIR:—Yours of the 27th ult. is this minute to hand. The four thousand eight hundred and fifty-six dollars and seven cents (\$4,856.07) has been expended in our city schools, but neither the clerk nor the treasurer of our city school board reported it to me,

therefore it was not included in my Annual Report. It should be added to the receipts and to the expenditures as follows :

Amount received and on hand per County	
Treasurer's report	\$20,114 00
Am't rec'd from city paid to City Treasurer	4,856 07
Total received.....	\$24,970 07
Am't expended per County Trustee's report..	\$13,404 49
Am't expended per City Schools Treasurer..	4,856 07
Total expenditure.....	\$18,260 56
Amount on hand.....	\$ 6,709 51

Yours truly,

WM. G. COCKRILL,
County Superintendent, Madison County.

KNOXVILLE CITY SCHOOLS.

Hon. Thomas H. Paine, State Superintendent.

SIR:—I herewith submit for your consideration, as it becomes my duty, my third report of the schools under your charge, the same being the 13th annual report, and presenting the management, growth and condition of the schools during the scholastic year beginning August 30th, and closing June 4, 1884.

SUMMARY OF GENERAL STATISTICS FOR THE SCHOOL YEAR ENDING JUNE 4, 1884.

Enumeration from 6 to 21 years old.....	4,315
Total number of pupils enrolled.....	2,737
Average number of pupils belonging.....	2,054
Per cent. of attendance on number belonging.....	95.11
Average number of pupils attending.....	1,955
Per cent. of attendance on enrollment.....	71.42
Per cent. of enrollment on enumeration.....	63.43

7—School.

Number on roll at the end of the year.....	1,785
Total number of days present.....	369,586½
Total number of days absent.....	18,674½
Total number of days in the session.....	200
Total number of days taught.....	191
Total number of days tardies.....	1,231
Per cent. of tardiness on attendance.....	0.167
Per cent. of tardiness on number belonging.....	0.158
Per cent. of scholarship.....	74
Visits of the Board.....	301
Visits of the Superintendent { Regular 589 } { Casual 409 }	998
Visitors.....	7,421
Number of teachers constantly employed.....	44
Average number of pupils belonging to a teacher in the first and second grades.....	75
Average number of pupils attending to a teacher in the first and second grades.....	71
Average number of pupils belonging to a teacher above the first and the second grades.....	32
Total cost of the school.....	\$24,421 30
Total cost per pupil enrolled.....	8 92
Total cost per pupil belonging.....	11 89
Total cost per pupil attending.....	12 54
Average salary paid teachers.....	442.08
Number of school buildings owned by the city.....	5
Number of rented buildings.....	3
Number of rooms occupied.....	44
Number of sittings.....	1,950
Value of scholastic buildings.....	\$31,500
Value of school lots.....	15,000
Value of furniture.....	3,500—\$50,000

COMPARATIVE TABLE FOR SIX YEARS.

STATISTICS.	1878-'79	1879-'80	1880-'81	1881-'82	1882-'83	1883-'84
Number of male pupils enrolled.....	684	786	914	970	1,068	1,314
Number of female pupils enrolled.....	825	973	1,070	1,167	1,197	1,423
Total No. of pupils enrolled.....	1,509	1,759	1,984	2,137	2,265	2,737
Average number belonging.....	1,009	1,328	1,526	1,590	1,607	2,054
Average number attending.....	930	1,253	1,458	1,512	1,519	1,955
Total number of tardies..	2,559	1,243	367	590	657	1,231
Per cent. of attendance...	92	94.2	95.5	95.08	94.51	95.11
Per cent. of tardiness....	72	26	0.064	0.097	0.108	1.153
Per cent. of scholarship..	77	81	81	80	77	74
Per cent. promoted from final written examinations.....	72	66	77	75	74	75
Per cent. promoted from all grades.....	68	64	73	68	67	67
Per cent. on enrollment on scholastic population.....	68	64	65	70	70 87	63 43
Total cost per pupil enrolled.....	\$9 05	\$8 48	\$7 81	\$7 55	\$8 18	\$8 92
Total cost per pupil belonging.....	\$13 54	\$11 23	\$10 28	\$10 12	\$11 61	\$11 89
Average salary paid teachers.....	\$442 50	\$416 65	\$442 91	\$421 67	\$435 48	\$442 08

THE YEAR'S RECORD.

Owing to the fact that the statistics of the ninth ward schools were not included in those of the report of 1882, and the increase in the scholastic population of the other eight wards has been greater than for some years past, the increase for the current year in enrollment, expense, number of teachers employed, etc., is greater than that of any previous one. The increase in enrollment is 472; in the expenses of the schools, \$4,500.61; in the number of teachers employed, 10. From the scholastic census (4,817) of the present year, it appears that there has been an increase of 502 of those who are entitled to seats in the public schools. This will necessitate an increase of accommodations, and as the Treasurer says in his report, an additional outlay of as least \$3,000 during the coming year.

The work of the schools was, for a short period at the beginning of the year, hindered by the want of accommodations, both in the Peabody and Austin Schools. This resulted in the formation of

the Broad Street School in the 8th ward, and the relinquishment by Miss Austin of the room formerly occupied by her as an industrial school. But the former arrangement has not worked as well as could be desired. The location of the school is too remote for those living in the extreme limits of the 7th ward, so that in one case at least, if not others, the pupil was unable to attend school, and the attendance on the part of the whole school was poor. It is to be hoped that not only will a school-house soon be built in the 8th ward, but that the Peabody will be enlarged to meet the needs of that part of the city.

The outlook at the beginning of the year was not very encouraging, when one of our most efficient teachers, Mr. Chas. Mason, resigned to take charge of the Jonesboro graded schools. To fill his place required transfers, which for a time interfered with the working of the schools. This resulted in placing Mr. W. M. Rogers in charge of the Peabody, a position which he has filled with ability and efficiency.

The total cost per pupil enrolled has increased 74 cents; per pupil belonging, 28 cents; per pupil attending, 20 cents. The increase in the last two is considerably below that of 1882-'83, being \$1.49 per pupil belonging and \$1.70 per pupil attending. The increase in the cost of the schools, year by year, is due, of course, principally to the cost of tuition, which necessitates additional outlay for new teachers and an increase of the salaries of those already employed by the Board.

The efforts of all entrusted with the work of instruction has been to make it as thorough and efficient as possible.

Of course, there are defects and faults in our methods, which the censorious and hypercritical make the most of, but our constant aim shall be to remove the one and correct the other.

ALBERT RUTH,
Superintendent.

MEMPHIS CITY SCHOOLS.

RECEIPTS.

Amount of indebtedness, July 1, 1883.....	\$15,532 62
Amount received from State and County...\$27,897 81	
Amount received from Taxing District.... 24,035 39	
Am't received from other sources (tuition).. 804 75—	\$52,737 95

EXPENDITURES.

Salaries of teachers.....	\$33,161 93
School sites, buildings and repairs.....	1,490 41
Paid Commissioners and Janitors.....	3,782 95
Paid City Superintendent.....	1,800 00
Paid Secretary.....	1,200 00
All other expenses, rents, water, gas, fuel, &c.	5,955 39—\$47,390 68
Balance indebtedness June 30.....	10,185 35

SCHOLASTIC POPULATION.

White male.....	3,494
White female.....	3,725
Total white.....	7,219
Colored male.....	2,824
Colored female.....	3,126
Total colored.....	5,950
Grand total.....	13,169

ENROLLMENT IN SCHOOLS.

Pupils Enrolled During the Year.

White male.....	1,135
White female.....	1,258
Total white.....	2,393
Colored male.....	823
Colored female.....	1,010
Total colored.....	1,833
Grand total.....	4,226

AVERAGE DAILY ATTENDANCE.

White.....	1,715
Colored.....	1,266
Total... ..	2,981

MISCELLANEOUS.

Average number of days taught during year.....	167
Average cost of teachers per month.....	\$40 64
Average compensation of tuition per pupil	} per year..... 11 29 per month..... 1 41½

Respectfully submitted,

CHAS. H. COLLIER,
Superintendent.

NASHVILLE CITY SCHOOLS.

FINANCES.

In consequence of the change in the plan of the Municipal Government having occurred in the midst of the session, the school moneys have passed through the hands of two different sets of disbursing officers. The system of book-keeping adopted for the auditor now in charge, is so dissimilar from that used by the former treasurer, as to render it very difficult, if not wholly impracticable, to obtain an account of payments made, classified under the usual heads. We have, therefore, as a more satisfactory exhibit, instead of giving these two somewhat discordant reports, made up from them and our check-book the following statement :

RECEIPTS.

Amount on hand June 30, 1882.....	\$ 8,952 73
Received from city taxes.....	48,437 59
Received from county taxes.....	36,426 00
Received from State taxes.....	3,362 40—\$97,178 72

EXPENDITURES.

For pay-roll of teachers for the year.....	\$68,582 10
For pay-roll of janitors for the year..... ..	3,823 00
Salary of Secretary.....	60 00
Fuel	1,518 34
Printing and advertising.....	510 70
Care and repair of clocks.....	222 75
Books and stationery.....	995 86
Rents.....	681 25
Furniture.....	1,948 20
Window shades and blinds.....	203 44
Painting and glazing.....	578 46
Papering, plastering and plumbing.....	2,882 19
Repairs.....	2,015 22
Improving school grounds.....	77 05
Apparatus and minerals.....	554 35
Scavenger work.....	185 63
Incidental expenses.....	586 41
Miscellaneous supplies.....	139 10
Taking scholastic census.....	280 20
Stoves and heating apparatus.....	793 17
Real estate.....	300 00
Cash on hand June 30, 1883.....	10,241 30—\$97,178 72

There were accounts audited but still unpaid at the close of the year amounting to \$620, which will reduce the balance on hand to \$9,621.30, and make the total annual expenditure \$87,557.42. The latter is an increase of \$8,360.12 over that of the previous year. All salaries have been paid as soon as due, much to the convenience and gratification of employes, and in their behalf I here thank our prompt and considerate financial agents.

GENERAL STATISTICS.

Population of the city (census 1880).....	43,543
Enumeration from 6 to 21.....	14,010
Different pupils enrolled (no duplicates).....	7,073
Average quarterly enrollment.....	6,300
Average number belonging daily.....	5,809
Average number attending daily.....	5,498

Probable number in private schools.....	500
Total number tardy.....	740
Per cent. of tardiness on attendance.....	0.07
Per cent. of enrollment on population.....	16.24
Per cent. of enumeration on population.....	32.17
Per cent. of enrollment on enumeration.. ..	50.48
Per cent. of attendance on enrollment.....	77.73
Per cent. of attendance on number belonging.....	95.45
Average per cent. of scholarship.....	.69
Average age of pupils.....	12
Total number of days belonging.....	1,057,916
Total number of days present.....	1,009,774
Total number of days in session.....	198
Total number of days taught.....	187
Number of special teachers.....	2
Number of regular teachers.....	114
Number of pupils to the teacher.....	40
Cost of tuition per pupil enrolled.....	\$9 35
Cost of tuition per pupil belonging.....	11 39
Cost of tuition per pupil attending.....	12 03
Average salary paid teachers	570 53
Total paid special teachers.....	2,250 00
Total paid regular teachers.....	63,932 10
Total cost of tuition.....	66,182 10
Total incidental expenses.....	20,755 32
Total annual cost.....	86,937 42
Number of school houses.....	13
Number of school rooms.....	49
Number of recitation rooms.....	76
Number of sittings.....	5,210
Value of school houses.....	\$166,000 00
Value of school lots.....	52,000 00
Value of school furniture.....	13,000 00—\$231,000 00

COMPARATIVE TABLE FOR FOURTEEN YEARS.

YEARS.	TOTAL ENROLLMENT.			Average number belonging.	Per cent. of attendance.	Per cent. of enrollment.	Whole number tardy.	Per cent. of tardiness.	Number of pupils to teacher.	Cost per pupil for tuition.	Total cost per pupil.	Average salary to teachers.
	Boys.	Girls.	Total.									
1870-71	1,798	1,763	3,561	2,387	93.00	62.00	6,129	1.38	42	\$14 12	\$20 63	\$654
1871-72	1,750	1,308	3,058	2,478	95.35	66.50	3,287	0.70	42	16 81	21 13	683
1872-73	1,879	1,843	3,722	2,630	95.60	67.54	2,451	0.49	45	16 91	21 89	684
1873-74	1,804	1,852	3,656	2,655	96.07	68.92	1,368	0.27	40	18 14	22 07	688
1874-75	1,967	2,031	3,998	2,950	96.63	71.28	1,113	0.22	42	17 08	22 28	710
1875-76	2,005	2,154	4,159	3,062	96.11	70.76	1,660	0.21	40	17 20	21 75	675
1876-77	1,913	2,119	4,032	3,065	95.80	73.81	1,004	0.17	42	15 56	19 39	601
1877-78	2,008	2,227	4,235	3,258	95.70	73.62	1,357	0.22	43	14 42	17 80	601
1878-79	1,925	2,197	4,122	3,336	95.63	77 41	1,051	0.16	42	14 55	17 41	599
1879-80	2,869	3,229	6,098	4,573	94.87	70 49	2,377	0.29	48	11 30	14 34	544
1880-81	2,751	3,094	5,845	4,581	95.43	74.78	1,516	0.19	40	11 90	15 23	573
1881-82	2,769	3,276	6,045	4,765	95.62	75.56	1,012	0.12	42	11 87	15 38	582
1882-83	2,870	3,298	6,168	4,635	95.18	71.47	709	0.08	36	13 00	16 98	578
1883-84	3,281	3,792	7,073	5,809	95.45	77.73	740	0.07	40	12 03	14 96	570

Comparing the above figures with those of the preceding year, we find the following significant differences: In the scholastic enumeration there has been an increase of 534, while the number enrolled is 905 greater, and the average number belonging and average attendance have increased respectively 1,174 and 1,090.

It is therefore evident that while the scholastic population of the city is growing at rather more than a normal rate, the number entering the schools has been proportionately much larger.

This is a gratifying proof of the undiminished favor in which the system is held by the public, and the higher appreciation of its advantages upon the part of the youth of the city.

We have with difficulty been able to accommodate this increased number by employing nine additional teachers and by increasing the size of classes, there having been 40 pupils assigned to a teacher, instead of 36 last year.

The per cents of attendance on enrollment and on number belonging show that those entering were as regularly in their places as formerly, notwithstanding there were frequent obstacles presented in the prevalence of contagious diseases and an unusually severe winter.

INSTRUCTION.

The course of study has undergone no material change since our last annual statement, except that, as at the time was suggested, part of the work in the Sixth and Seventh grades has been redistributed so as to relieve them, and to add to that required in the Eighth.

In order to secure more uniform results in teaching, the studies of each grade have been separated by quarterly limits, within which instruction must be given for each successive interval. That is to say, teachers must not advance beyond the point fixed in the course, but, having reached it, shall spend the time in reviews. It is greatly to be preferred, however, and teachers are required as nearly as possible to make the work of pupils easily progressive, so as to complete it with the close of each quarter, leaving no time for reviewing. The true practice is to teach thoroughly as we go, recalling from day to day, if necessary, abstruse principles, thus erecting the educational structure on a firm foundation and with permanently good walls, so far as it may have been built. The system of general reviews is, or inevitably degenerates into, a process of cramming, and will always produce unsatisfactory results.

The fault not unfrequently found with public schools, that they require too much of pupils, has been carefully avoided here. With regular attendance and fair devotion to duty, the average child can easily accomplish the work assigned in the time allotted. If there are complaints they are most generally in the opposite direction, to the effect that parents think that children have too little to do. This is usually with reference to the lower grades, in which it is enjoined upon teachers to require no home work in the first two years, and as little as practicable in the third and fourth. We fear that some of those in charge in the two last, and even of higher grades, transcend their orders in prescribing tasks to be done out of school, with pen and ink, such as copying text, transposing poetry, writing analyses, etc. Children generally are not provided at home with proper conveniences for doing such work, and hence it is poorly executed; but such a course is most objectionable from its tendency to wear upon the energies and health of children by overtaxing them. Under judicious management and in well regulated schools they will voluntarily do the amount of outside study necessary for maintaining a creditable stand. For those studiously inclined

home encouragement should be rather away from than toward books, and laggards may best be reached by enlisting discreet parental influence.

An educational journal truthfully says: "The most obvious cause of the failure of formal education is the neglect of natural laws. We are in too much of a hurry. Instead of adapting our teaching as nature does, to the child's developing powers and growing needs, we ply our little pupils with knowledge about which they do not and cannot care, with the inevitable effect of disgusting them with learning and delaying their mental development." Strangely this radical mistake is oftenest made, where it does the greatest harm, in the primary schools, and a kindred error is not unfrequently the outgrowth of this one. Injudicious teachers, having, with the approval of ambitious parents, overtaxed the minds of their youthful charges, next devise hot-house processes for arousing interest, or adopt severe discipline to enforce it. The true remedy obviously is to be found in realizing that we are dealing with beings of varied faculties, which require normal, gradual exercise for their development. The right ends to be sought are the formation of correct habits of observing, feeling and acting, by training the mind, cultivating the heart and controlling the will. These purposes necessarily qualify, and in fact determine, the means to be employed for their accomplishment. Hence, in teaching, the manner is much more important than the matter. Results depend not so much upon what is taught as how teaching is done. If mind is awakened, faculties sharpened, and the reasoning powers developed, it is a matter of secondary consideration what have been the subjects taught; but if only the memory has been exercised, and undigested facts stored up in the mind, while the reason is clouded and self-reliance destroyed, the process may be perfect in theory, but is a failure in practice.

This accounts for the wide difference in the character of instruction of different teachers and institutions of learning in which, perhaps, the same methods are used. In one you will find the children close observers, ready thinkers, confident in investigation, and withal modestly unconscious that they are proficient; while in another the pupils will be very ready with prepared recitations and familiar formulas, easily confused with every new presentation of an old subject, wanting in individuality, but inordinately inflated with an

over-estimate of their own attainments. Very naturally, too, their parents are as much elated and as badly deceived as they. Hence, teachers of this class often are for a time the most popular and the most successful to be found.

This, then, is the true standard of comparison in determining the relative merits of teachers. Profound attainments, broad culture and professional training are prime essentials in the character of the accomplished instructor; but there is another element that must be conjoined with these to secure complete success. This is the power to understand the minds and hearts of children, so as to easily command their respect and sympathy. Some appear as having been endowed by nature with this kind of magnetism, but the great majority, possessed of it, have acquired it by emulating high models of excellence, practicing patient self-control, and carefully studying the laws of mind. They are an invaluable acquisition to any system with which they may become connected, and every reasonable condition should be complied with to retain them in service. It has been the policy of your Board and of your predecessors in office from the first to extend every encouragement to such, and to those aspiring to reach the same standard of excellence.

Respectfully,

S. Y. CALDWELL, *Superintendent.*

DIGEST
—OF—
COUNTY SUPERINTENDENTS' REPORTS.

BEDFORD COUNTY.

. WM. H. WHITESIDE, SUPERINTENDENT, *Shelbyville.*

In making this, my second annual report, I have no very marked changes to make on last year's report. Our school work has moved smoothly on, showing a gradual and healthy increase of enrollment and average attendance. One thing which I note with pleasure, is the growing sentiment or determination on the part of the people to henceforth elect none but the best men for directors.

Allow me to suggest, that if the time of making the reports was changed or made to run with the common year, and the right to approve all warrants for school money restored to the Superintendent, I think our reports could be gotten up more promptly and correctly.

TEACHERS.

The teachers of this county deserve much credit for the interest and energy displayed in their work, many of them spending their means and leisure time in attending the best Normal Schools in the country, and otherwise fitting themselves for successful work in the school room, and the result is that our schools are keeping pace with the best in the State.

HOUSES, FURNITURE, ETC.

Since my last report there have been finished up, five very neat and comfortably houses, two of these costing about \$1,000 each,

the other three about \$500 each ; and at this writing the subject of consolidating schools and erecting good houses is being agitated in two of our most backward districts.

INSTITUTE.

We had this year a three days' institute, conducted on the plan of general class work. The average attendance of teachers was good, and the interest manifested in the work by all present, was very gratifying ; indeed, I think it is conceded by all teachers who were present, that as to average attendance, interest taken and general utility of the work, it was one of the most successful institutes ever held in our county.

VISITS.

I have visited about all the schools in the county this fall, making it a rule to visit two schools a day, thereby giving myself time to see a good deal of the school work, and I find the schools almost without exception doing well where the teachers have been selected with sole regard to their capacity to teach well, but in some instances, where the teacher has been selected through personal favoritism, the school languishes.

FINANCES.

There has been no material change in our financial condition since my last report. Generally the directors have managed the school fund of their respective districts judiciously, with this exception, that they probably do not grade the salaries of teachers with enough regard to their qualifications to teach. I will close this report with the observation that the one great need of our public school system is more money, that the length of time may be made longer.

BENTON COUNTY.

D. J. ALLEN, SUPERINTENDENT, *Camden.*

In compliance with the school law, I herewith transmit my annual report of the Benton county schools for the year ending June 30, 1884, which I think is correct. I see from your last annual report quite a number of Superintendents only make a partial re-

port on account, they say, of directors not reporting to them. This is my fourth annual report, and I have never been many days late in getting my report complete. My plan is to deliver the blanks in person and explain the necessity of having all reports in due time, and then if they do not come up, I go after them and help them make them out, if necessary. I think it was a bad move when the Legislature repealed the law in regard to having the Superintendent to approve all warrants. When he had this power, and having the amount due each district, he could always tell how long the schools were taught, and prevent many violations of the school law. I also think that we should have money sufficient set apart by the State for a five months' school, for a school for a shorter term is not of much account. I try to visit all my schools and give them encouragement, and confer with the teachers and district directors in regard to the promotion of the school interest. I have also endeavored to keep up a regular teachers' institute for the benefit of the teachers, and through them for the benefit of the patrons, and we have some teachers who take some interest in these meetings. I try to convert them into a training school, and have exhibited the best methods of imparting instruction in the branches required to be taught by the school law, and have other matters discussed in regard to school government, etc. But while we have some good teachers, there are also fogies in the school room as well as in other places. I notice during my visits to the schools, that those who attend the institute, take school journals and read books on theory and practice, are *teaching* school, while those who do not, are only *keeping* school. If we had enough who were qualified, I would be in favor of the school keepers following some other avocation, for I verily believe they do more harm to the cause of schools than any other class of persons. I think there should be more legislation in regard to giving inducements to our Normal Schools at home, as I believe good teaching will do more to bring our schools in favor with the people than anything else.

Although the additional tax was voted down here this year, I believe yet it is growing in favor with the people, as there were more votes cast for it than ever before. I still hope, trust and pray that it will not be long until all will gladly receive the benefits of a free education—the rich and the poor alike.

BLEDSOE COUNTY.

T. F. HALE, SUPERINTENDENT, *Pikeville*.

Pardon my delay. Our Trustee has been sick and could not make his report to me earlier. Our schools are doing better this year in some parts of the county. The greatest trouble here is, so many do not send to school. Some send none at all, while others send so irregularly that their children do no good in school. I believe in some instances a compulsory school law would be of great profit. I also think the law should be changed so that County Superintendents should approve all school orders so that the receipts and expenditures could be kept by his book alone.

BLOUNT COUNTY.

A. M. GAMBLE, SUPERINTENDENT, *Maryville*.

Our common schools are growing in interest with the masses. Most of our directors are taking more than usual interest in their work, but some of them seem to think the longest schools are the best, consequently cheap teachers are in demand.

Our teachers generally are alive to their work. Many of them are young with but little experience. Some of them are not yet convinced that there is any knowledge necessary for successful teaching, save a knowledge of text books.

I have endeavored to introduce such educational works as I thought they should read, and with some success.

I have held seven teachers' institutes, which were well attended and a lively interest taken in them by patron and teacher. I have visited fifty-two schools, to most of which I delivered addresses of encouragement; and at several places, by appointment, addressed the patrons, all of which were well received.

It would be well if our law could be so amended, that the material for the report of the County Superintendent may be forthcoming, or a penalty attached. The directors might be paid for their work. Thus we would be more likely to have efficient boards. I would suggest that you recommend to our Legislature, that Physiology and Hygiene be substituted in our common schools for Geology, and Civil Government for Elementary Agriculture.

BRADLEY COUNTY.

J. N. VARNELL, SUPERINTENDENT, *Cleveland.*

This report is much behind time, on account of a failure of directors and teachers in furnishing their reports to me. It is impossible to get statistics absolutely correct from so many different sources ; especially under the present leniency of the school law.

My figures in reference to the finances and scholastic population are correct, while all the rest are only approximately true. I think our schools are doing better work than in any former year. During the present session I have visited nearly all the schools under my supervision. I am of the opinion that our first and greatest need is more funds to run our schools a longer term ; another serious obstacle to their progress is the want of comfortable houses, conveniently arranged for school purposes. In many districts the houses are so open as scarcely to furnish protection from the rude blasts of winter. I have agitated this subject both publicly and privately, and I trust some improvement will be made in this direction.

It seems that our people are rather slow to believe that good schools cannot flourish in rude houses, and the one is a necessary adjunct to the other.

The bad location of school sites is another difficulty almost as great as the preceding. In not a few districts there are three or four schools where one or two would be sufficient, if placed at central points. I am at a loss to know what to do in such cases. Even if the directors are willing to rearrange the houses, the people are obstinate and bitterly opposed to a change. These are some of the disadvantages under which the teachers of the county are laboring. Is it to be wondered at, then, if their progress is very slow ? With an earnest, active corps of teachers to aid me in my efforts at advancement, I am confident that much will be done to obviate these difficulties.

CARROLL COUNTY.

S. E. TUCKER, SUPERINTENDENT, *Huntingdon.*

We are still improving ; more scholars ; more money ; better houses ; new districts ; better directors ; more efficient teachers ; larger attendance.

8—School.

FINANCIAL.

Our financial condition is good; our directors do not allow our schools to run in debt; our public school fund grows gradually. Our respected County Court believes that the 8,000 scholars we have will soon be the citizens of our county, and they are determined to give them a chance to educate themselves. They have not done any other one thing so important and beneficial to our county. The children will rise up some day and call them blessed.

Our excellent Trustee attends to his business promptly. Some of our directors have been imposed upon by map agents, who sold to them maps at an exorbitant price, drew the money and have not as yet furnished the maps. The apportionment last winter was \$1.50 to each pupil.

PROGRESS.

Our improvement for the last year is very perceptible and laudable. First, our honorable County Court has increased the school tax on property .02½ per cent. Wages for good teachers have increased \$2.50 per month. The teachers have improved considerably on the curriculum. Not a single second grade certificate has been allowed since May, 1884. All the teachers now pass on Geology and Elements of Agriculture; though at our first institute in April, 1883, a resolution was passed by forty of the best teachers in the county to petition you to allow me to waive geology in my examinations. Last year there were twenty-five or thirty schools without blackboards; there are not now over six or seven, and the directors faithfully promise to have them by next term. The six thousand year old bench has given place to the new comfortable desk, in several of our schools; new houses have been erected and old ones improved. Our examinations are impartial and more thorough. We hold them at the county seat two weeks before the school term, and make them both oral and written, and examine each applicant from one to three days. No duplicating of certificatees is allowed. It means a non-performance of duty on both the Superintendent and teacher; it means partiality, and lowers educational interest and deters raising scholarship. Double the number of school journals and books on education are now being read by our teachers and many have supplied themselves with apparatus. Our institutes meet at the appointed time, the white three times a year, and the colored

annually ; but there are many teachers that take no interest and do not attend.

DIRECTORS.

Much of the success of the schools depends on the directors. They should be the very best men in the different districts—men competent to judge of the excellency of teachers and who will pay according to qualifications and work to be done ; not men that will go about trying to hire the cheapest teachers. Too many accept the position of clerk and do not comply with the duty. The people are more careful about who they elect, and I make it a rule to appoint no one till he is recommended by the magistrates of his district. Our directors, by three-fourths, are the leading men of the county. They attend to their business promptly, and are interested in the development of the young.

TEXT-BOOKS.

The adoption of a series of text-books, three years ago, has generally been complied with, and saves a great deal of trouble and expense.

SCHOOLS VISITED.

I have visited over a hundred schools since last report. The teachers, directors and scholars seem to appreciate my visits.

SCHOOLS.

Our district public schools are doing an excellent work for the students of the county, but the terms are too short. Some of them, where there is a large number belonging to a house, have a school two months in the summer and three months in the winter ; but a large majority do not have but one school—from six to ten weeks—each year.

HIGH SCHOOLS.

We have not had so many high schools this year as last, though the interest is good ; I presume they are resting for next year. McKenzie, Bethel College, McTyeire Institute and the Public High School, have all continued in session ten months, Huntingdon ten months, Trezevant eight months, and Ashwood eight months.

CARTER COUNTY.

B. M. HYDER, SUPERINTENDENT, *Elizabethton*.

In obedience to the requirements of law, I submit herewith my annual report for the year ending June 30, 1884. It is taken in part from last year's report, as several directors failed to make full reports. Our schools are run under many disadvantages, but with all the drawbacks, I am glad to report some visible signs of improvement. The people are taking a more lively interest in educational matters than they formerly did.

There are some good school-houses in our county, but many need repairing, and better furniture. We have no uniformity in textbooks, and some districts have too many schools. One of our greatest drawbacks is want of money. With plenty of money we could get good teachers, and with good teachers we would have good schools.

CHEATHAM COUNTY.

T. J. ADKINN, SUPERINTENDENT, *Ashland City*.

I have the honor herewith to transmit my annual report for the year ending June 30, 1884.

The schools in this county are improving to some extent. The people, as a mass, are taking a greater interest than ever before, which shows the present system is gaining in popularity. Our schools will continue longer this year than ever before. Since the present law was enacted, a better class of teachers are employed. Our schools this year will continue about four and a half months, with a better attendance than heretofore.

Suit is still pending against the sureties of ex-Trustees Weakly for balance (\$1,471.29) one thousand four hundred and seventy-one dollars and twenty-nine cents, in their hands.

CLAIBORNE COUNTY.

C. H. WHEELER, SUPERINTENDENT, *Quarter*.

I have the honor herewith to transmit my annual report for the year ending June 30, 1884. It is as correct as I could make it.

from the reports before me. It has been very difficult to get full and correct reports from directors and teachers. Some teachers have failed to report. The county trustee has not made any report. The schools in my county are tolerably prosperous.

COCKE COUNTY.

RUFUS L. HICKEY, SUPERINTENDENT, *Newport*.

I send you to-day my second annual report of the public schools of Cocke County, and I must say again that I cannot make a correct report as respects everything required to be reported by the law. It is almost impossible to get teachers to report everything by the proper time. I have received, up to the date of this report, about one-half the abstracts that should have been returned to me ; consequently, all abstracts that come to me after making this report will be of no special benefit or aid to me ; for I consider that the intention of the law was for all abstracts to be returned to the County Superintendent on or before the 15th of September, and they were to be used by the County Superintendent in making his report to the State Superintendent. I have also received reports only from three directors, giving value of school property in their districts, etc. I will approximate the school property as nearly as possible.

You will see from my report that our schools have been attended more regularly this year than last. That is, we have had a better daily attendance, which is very encouraging to all supporters of public schools in Cocke County. I have visited, so far, sixty schools, and I find them generally in good condition. Our teachers are thoroughly awake to their duty, and are doing everything to advance the educational interests of the county. I see that our school-rooms are furnished with blackboards, desks, etc., much better than they were last year.

Taking everything into consideration, I think we are advancing, slowly but steadily.

I have made it a point to examine the different classes in the school-rooms, and get the method of the teachers, to know whether they have been instructing their schools properly or not, and if a teacher has not, I have never failed to tell him privately of his errors.

COLORED SCHOOLS.

I have tried to give special attention to the colored schools of my county. The teachers this year are of a better grade, and they are working faithfully for the best interests of the children. Their school-rooms are very well supplied with blackboards and desks, and the educational prospects of the colored people are beginning to brighten in this county.

I hope the educational wave will still continue to roll, until every one will give the cause that encouragement it deserves.

COFFEE COUNTY.

C. N. TOWNSEND, SUPERINTENDENT, *Hillsboro.*

The public schools of this county for the past year, with few exceptions, have been very prosperous; most of our schools are Normal in methods, and are excellent. The standard of schools and the educational interest of the county have been elevated considerably by the work done in teachers' institutes, and by the closer observance of the instructions in licensing teachers. Regular monthly institutes were held at Manchester, and weekly ones were held at other points in the county, during the sessions of the schools, which were well attended by the ablest and most successful teachers. The teachers feel the great importance of their work, and are laboring earnestly to advance the cause of education. The people also have been more watchful of their educational interest than ever before, and, by reason of this, have aided materially in pushing forward and building up the educational interest of our county. I believe public sentiment is favorable to and satisfied with the work of our schools. I have visited the schools in every district, and found most of them well attended which had competent teachers. I believe the teachers discharged their duty as such in a faithful manner, notwithstanding the small wages received for same.

While I believe our schools are much better than heretofore, and will compare favorably with most of those in the State, yet there is much to do to bring them up to that standard of excellence which is due to the intelligence and public spirit and educational enterprise of the people. Our schools cannot be elevated properly

without an increase of revenue sufficient to raise the wages of good teachers so that their services can be secured. The question of revenue for school purposes is, in my opinion, an important one, which ought to receive the consideration of those whose business it is to aid in perfecting our system of public schools in Tennessee, as well as those who are at the helm of the State and nation.

Give Tennessee her share, proposed by what is known as the Blair educational bill, and let it be added to the fund furnished by her and the counties which compose her, and ere long she would pass from the foot of illiteracy and take her place as queen of lights in that grand cluster of States which forms this great government of ours. Let us have the aid offered by said bill.

CROCKETT COUNTY.

R. S. THOMPSON, SUPERINTENDENT, *Alamo*.

I regret that my report is not so full as it should be, but it is impossible for me to do better. I have compiled all the reports I could get in submitting this to you. I have one suggestion to offer looking to the collecting of more accurate statistics in the future, and that is, that officers and teachers be not allowed to draw full pay for their services until full and accurate reports have been filed with the County Superintendent. When the law required the approval of the County Superintendent to orders on the trustee, reports were promptly filed, but now it is impossible to get them in season or out of season.

DAVIDSON COUNTY.

W. H. FERRELL, SUPERINTENDENT, *Nashville*.

A retrospect of the year's work shows us many defects that can be remedied, perfections not obtained, obstacles to be removed, and mistakes made by many of us. We earnestly hope the broad mantle of charity will be thrown around us, as our mistakes were from pure motives and zealous work, and surely from the best wishes for the educational interests of this county. In punctuality, attend-

ance, deportment, scholarship, enrollment, improvement in school buildings, and the increase of popular appreciation, the record of the year is brighter than any that has preceded it in the history of our schools. Our scholastic population has increased 1,436 for 1884-5, the enrollment 1,080, and daily attendance 1,006, since my last report, which shows very plainly that there is a deep interest felt by all. In visiting our schools I have found more patrons looking after the pupils than ever before. It is true, a large majority of them never visit the schools.

The greater number of our directors are securing the services of only first-class teachers, and are paying them a salary sufficient to enable them to do efficient work. Too much cannot be said of our directors and teachers as a body. It is a lamentable fact, however, that a few of our directors have thrown aside their legal rights, and let the people elect the teacher. This has caused more dissension than any one thing; but suffice it to say, this plan is never repeated.

We have run our schools on an average of eight and one-half months; paid the teachers at the end of the month in every district save one. In addition to this we have built four elegant brick houses, five beautiful frame ones and one comfortable log house, and furnished them and many others with the improved desks and seats.

A word for our teachers: It is true we have lost a few of our best teachers, but their places have been supplied by teachers educated in our own schools and those in and adjacent to Nashville. A lack of true discipline is one of the leading obstacles in the way of some of our teachers. It is simply this: they are afraid of that which they know to be duty. A great many of our teachers are ladies and gentlemen of culture and rare talents, whose labors do not close with the day, month or year, but whose work is life-long. They are erecting monuments in this land of ours and in the dear children's hearts—

“That will resist the empire of decay
When time is o'er and worlds have passed away;
Cold in the dust the cherished heart may lie,
But that which warmed it once will never die.”

DECATUR COUNTY.

W. H. H. McMILLAN, SUPERINTENDENT, *Decaturville*.

This report is as near correct as I can make it, on account of the failure of the district clerks to file their reports, which I have endeavored to effect, but in vain.

I have no financial report. Our County Trustee died last April. He appointed one of his securities his executor. The remaining securities wanted the executor to wind up the official as well as private business, which is being done.

The County Court, at its quarterly term in July, elected Mr. J. T. Rogers as Mr. Long's successor. I have called upon Mr. Rogers for the report, but he, not handling much of the school fund, has not been able to make a satisfactory report.

As soon as Mr. Welch, the executor, and Mr. Rogers make out their report, I will forward it.

Considering the many obstacles, I think the schools are doing tolerably well. Teachers have been prompt in attending the institutes I have held, and have taken an active part.

DEKALB COUNTY.

ALVIN AVANT, SUPERINTENDENT, *Smithville*.

Whilst I have not realized during the last scholastic year all that I hoped for and expected, I should, I suppose, to a great degree, be satisfied with the progress and results of the public schools in my county. Our County Court, at its last January term, levied a tax of twenty cents on the hundred dollars' worth of property, and a tax on all privileges, for public school purposes. This greatly increased our school fund, and has enabled us to have upon an average about six months' schools throughout the county. My method of testing the qualification of applicants to teach was by public examination, in which I was assisted by Professors Dodson and Kelley, of Pure Fountain College. I find this method of obtaining teachers to be very satisfactory. It gives every one a fair and equal opportunity to try for a certificate, and has the beneficent effect of satisfying the public mind as to the qualification of the teacher.

I regret to say I have more trouble with district directors than

with all the remainder of the management of the public school system. It often happens that very improper men are elected to that office, who are governed by selfish motives, for themselves individually, relatives or friends. In this connection I wish again to call attention to a great defect in our school law, and a very great blunder, in my judgment, made by our Legislature in repealing that part of the law requiring the County Superintendent to approve all warrants before they are paid off by the trustee. The law as it now stands leaves the management of the financial part of the school system almost exclusively to men who very often are wholly incapable of such management. I would, therefore, suggest and recommend that the next Legislature be persistently urged to re-enact the law requiring County Superintendents to examine and approve all warrants before the trustee pays them off.

With the assistance of Professors Dodson and Kelley, Misses Ida Flynn and Ida Spence and others, of Pure Fountain College, I organized a teachers' institute at this place on the second Saturday in August. We have been meeting on that day in each month since. Our meetings are well attended by teachers and friends of education generally, and we find them to be of great interest and benefit. There is also a teachers' institute held monthly at Alexandria, under the supervision of Professors Gross and Boon, which is well attended and is doing a good work.

Wishing the educational interests in Tennessee an onward and upward march, I most respectfully submit this as my written report.

DICKSON COUNTY.

W. G. McMILLAN, SUPERINTENDENT, *White Bluff*.

My report is rather late, but I could not make it any sooner, as it was almost impossible to get directors to make their reports.

Owing to a better grade of teachers, schools are doing well and becoming more popular every year. I have visited a part of the schools, but my salary is so meager I could not afford to devote any more time. Our county is free from debt. If our County Court would levy a sufficient tax to extend the schools five months, and would pay the County Superintendent a sufficient salary to justify

him to give his entire attention, it would be a great deal better; but it seems they cannot see it in that light.

FAYETTE COUNTY.

W. J. ELAM, SUPERINTENDENT, *Somerville.*

I herewith submit this my second annual report of the public schools of Fayette County. Owing to the tardiness of two of the clerks, my report will not reach you as early as I intended. The outlook in this county is very encouraging indeed, and by reference to my statistics you will find an advancement all along the line. Our teachers have performed good and efficient work, and have, in nearly every instance, given ample satisfaction both to patrons and directors.

On account of sickness in my family, it was impossible for me to visit all the schools. As you are aware, our county is very large, and it would take at least three months to canvass it closely. Our board of directors is composed of the best men in the districts, and with but one exception they have been very prompt in the discharge of their duties.

In June I, with the assistance of Professor Liston, held a colored teachers' institute, as the result of which was formed a teachers' association, to meet every two months at different places in the county. Every one seemed to be delighted, and insist that we have one next year of two weeks' duration at least.

We have just adopted a uniform series of text-books throughout the county, which is another move in the right direction. My aim has been to raise the standard of teachers in our county, and if we could only do away with third and special grades the object I have in view could be easily accomplished.

FENTRESS COUNTY.

B. L. STEPHENS, SUPERINTENDENT, *Jamestown.*

In submitting this, my second annual report, it is with no small degree of pleasure to me to say, of a truth, that the schools of this

county have made decided progress the present year. We have a better class of teachers than ever before; they are better qualified, and more experienced in teaching.

More interest is taken in the cause of education than ever before. People are more willing to support the schools. Many of the schools will last till mid-winter, and in some parts of the county all the year.

Private schools have made a decided progress, with a large per cent. of enrollment and attendance.

The County Court levied a tax of 25 per cent. on the one hundred dollars' worth of taxable property for the year 1884.

While the present school law is very popular among the people, I think it could be made some better by amendments. Re-enact the law requiring school warrants to be approved by County Superintendents, and a record of them kept by him; and said superintendent to be present and take part in all settlements made by the County Court Clerk and the trustee, giving the County Superintendent the right to prosecute the clerk and trustee for failing to make settlement, as now required by law.

There are many schools that have few books that are alike. Teachers cannot avail themselves of the advantage of classing their schools, losing much valuable time in hearing classes recite.

I must speak of the colony at Allardt, in this county—the interest manifested in the cause of education by the citizens; they neither spare money nor labor, and have a fine school site and good building. The school opened this fall with one hundred students, and will continue all the year.

I am sorry to say that the trustee has again failed to make his annual report. I cannot tell why he will not report. I have urged him at different times, and waited on him until the 12th day of October, and, deeming it unnecessary to wait longer, I submit my report.

GIBSON COUNTY.

J. R. DEASON, SUPERINTENDENT, *Trenton.*

I herewith hand you the statistical* report of this county for the year ending June 30, 1884.

The public school machinery in this county is in good working

condition, with one exception, and that is that part which relates to the reports. But for this, my report would have been forthcoming long since. This is a large county, with a large number of schools and school officers, and about the only question which gives me any trouble now is getting accurate data for my reports. It has cost me much time, much labor and much friction of patience, but it is now complete, and I can with pride refer to the showing. I desire to call your attention to a few points in the report:

The number enrolled is not as large as usual. This does not arise from a want of interest, but from the fact that in these districts there were no schools during the year. The actual per cent. of enrollment is greater than ever.

The amount of money expended for teaching is less, while the average price paid teachers is greater. This also occurs from the same cause; that is, the amount of money expended does, but the average price paid teachers would most likely have increased if these districts had had schools.

To my mind, this is a most encouraging feature, for I do believe that our school system will never be what it should until such prices are paid for trained teachers as will obtain them in our rural schools.

You will note that fewer school-houses have been erected during the year. This occurs from the gratifying fact that in most of the districts there are now good, substantial frame houses; and in many places they are painted white, and even have *green blinds*.

Our schools are a source of pride to our citizens, and in every part of the county the greatest interest is manifested, and there is a generous rivalry to excel.

This closes my connection with the schools of Gibson county. I have had control for nearly six years. During this time I have seen the school tax raised from fifteen cents to thirty cents, and at the next term of the County Court will see it put at thirty-five cents. I have seen the school population increase over two thousand. During this time I have been in almost every school-house in the county, time and time again, and know the country roads as well, almost, as do the residents of the neighborhood. I have licensed nearly a thousand teachers. I have seen erected over fifty school-houses, and have seen nearly two hundred thousand dollars expended in the cause of education. I have tried in every way to carry out the spirit of the law, and while I have had considerable success, and with pride

call attention to the condition of the public schools to-day, yet I feel much more could have been done by close and untiring work.

There are several wholesome changes that might be made in the law, and which you ought to call to the attention of the next General Assembly. All teachers should be required to stand annual examinations until they have acquired a first-grade certificate.

There should be a law prohibiting any charge to be made for certificates by county superintendents. A more stringent and systematic arrangement should be made for the disbursement of the school fund. I have never found so much money as is employed in the maintenance of the schools of this State with so few safeguards thrown around it by the law. The manner of apportioning the school money to the schools should no longer be left in uncertainty. A great deal of confusion arises from this matter in this county. There are other changes which would in my opinion be of material advantage to the schools, with which I will not burden this report.

GILES COUNTY.

SPENCER D. CLACK, SUPERINTENDENT, *Pulaski*.

In submitting my annual report, you will see that we have had a very prosperous year. Our scholastic population, enrollment, daily attendance, average length of schools, and teachers' salaries are increased; whilst cost of tuition per pupil per month is not. All we now need is a longer term, and a more extended course of study. I hope, for the sake of the children of Tennessee, and the esteem I have for you personally, that our grand old Governor will reappoint our efficient State Superintendent of Public Instruction.

GRAINGER COUNTY.

JOHN G. WALLER, SUPERINTENDENT, *Red Hill*.

Part of my statistical report only approximates correctness; but with the reports I have collected it is the best that I can present.

Our public schools are in a prosperous condition. I have visited the most of the schools, and aim to visit all before they are closed.

The want of harmony among directors, teachers and patrons in some parts is a drawback.

We need a fund for the purpose of having a normal school every summer to prepare teachers for the work of the public schools.

The revocation of the County Superintendent's power and duty to approve all orders upon the Treasurer was, and is, a mistake. It greatly retards the work of collecting abstracts, directors' reports and census returns. Please work to have "the approving power" restored. Let a County Superintendents' Convention be called, if necessary, to give joint emphatic utterance on the matter.

I think a County Superintendent's term of office should be for four years.

The public schools are now really popular; the former discontent and dissatisfaction have subsided.

GREENE COUNTY.

H. W. FARNSWORTH, SUPERINTENDENT, *Greenville.*

We now have nine colleges, academies and seminaries in the county; in seven of these consolidated schools were taught with an aggregate enrollment of 1,280 pupils. A few years ago many of our people opposed the establishment of the higher or consolidated schools, believing that the numbers drawn to them would weaken the common schools so much as to render them of little value. However, I gave them all the encouragement in my power, and the wisdom of the course is apparent in the decided increase in the enrollment in the common schools. And I believe with intelligently directed energies in the County Superintendent, that in five years we could have a graded school in each district in the county; and as the benefits from these become more apparent, not many years will elapse before none but graded schools would be taught in all the houses.

I have devoted my time in the work for eight years and now cheerfully give way to more vigorous and intelligent superintendency.

HAMBLEN COUNTY.

F. B. DAVIS, SUPERINTENDENT, *Morristown.*

Enclosed you will find my second annual report of the schools for Hamblen county.

There has been considerable improvement in the school work in this county. The teachers are conscientious gentlemen and ladies, and are doing good work. The only drawback is the lack of money. If Congress would pass the "Blair Educational Bill" it would help us greatly.

There is great need of a law to compel teachers and directors to make their reports. Not more than one-half of them will report at the proper time; and some will not report at all. There is no reason why the Legislature should not pass a law that would compel them to do their duty.

HAMILTON COUNTY.

H. B. HEYWOOD, SUPERINTENDENT, *Chattanooga.*

The public schools of Hamilton county made reasonable progress during the year ending June 30, 1884. The enrollment was quite as large as usual, while there was considerable increase in the average attendance, it being forty-five per cent. of the scholastic population in all sub-sections having a school term.

The volume of influence hitherto operating in favor of the State system, and moderately active, is marshaling itself to a more generous support of the public schools, while it is receiving valued accessions from time to time. Doubt and halting are rapidly giving way to investigation and active support.

Our school term is too short. If fifty per cent. could be added to its duration, a unit of this addition would be worth two preceding it.

A series of grades was prepared after the close of the term, and in accordance therewith the schools are graded during the current term, 1884-5. This work has merit in several directions, which it is scarcely necessary to point out. Without it, we drift somewhat.

The following suggestions are respectfully made:

1st. A change in the law so as to require reports from the directors to be rendered July 15, instead of September 15; as the school year closes two months earlier than it did when September 15 was designated as the limit.

2d. A change in the regulations so as to require teachers to send abstracts directly to the Superintendent at close of term. As this report is made to and for him there seems no good reason why it should not go directly to him. It is believed that the practice will secure a more prompt completion of his consolidated report.

3d. That abstracts be so modified as to show total number of days present and total number of days absent.

4th. That provision be made for granting three-year certificates to teachers making an average of from 90 to 100 in each of two successive examinations.

5th. That private or single examinations be abolished, except in case of applicants who are non-residents of the State, or are prevented by sickness from attending normal or regular appointment.

There are other subjects, did space permit more than their mere mention, to which the attention of the authorities having the power to act might well be called; as whether a county board of education might be of service; said board being clothed with power to settle the question of uniformity in text-books, and to arrange other stated matters. Questions touching school districts on county lines, the districts consisting of parts of each county, might be definitely settled. These and other topics present some questions that are, theoretically, full of interest.

There stood upon the statute books a law requiring Superintendents to approve warrants. This has been repealed. It is barely probable that a diligent discharge of the duties involved under such a provision of law might, to some extent, be inconsistent with the full exercise of the *true* functions of the office. His work bears upon the schools, their tone and efficiency, and upon the advancement of the children of his county in the several branches of learning, and if the Superintendent fails here, he fails absolutely. No considerable obstacle should be interposed to the full play of such ability as he may possess in this direction.

The prosperity of a State depends somewhat on the quality of its school system. It is to be hoped that the character of our public schools may soon be such as to demonstrate to our citizens the high

degree of usefulness they may be made to attain, and, further, that in the near future they may take rank with the best that our common country can present.

HANCOCK COUNTY.

A. J. TYLER, SUPERINTENDENT, *Sneedville.*

I herewith submit my annual report, and am pleased to say that both directors and teachers have been more punctual and accurate in making their reports this year than ever before. While there has been some lack upon the part of teachers to report, I have been able, from the information I otherwise received, to make the report full and nearly correct.

It will be seen from the report that there is a continued growing sentiment in the minds of the people in favor of free schools.

The average attendance is greater, our first-class teachers, as a rule, have received more for their services and the amount of money for disbursement is greater than for any preceding year.

For the present year our County Court has levied a tax of twenty-five cents on the one hundred dollars' worth of taxable property in the county for school purposes, an increase of fifteen cents over any previous year, which insures longer and better schools for the future. We still need a uniform series of text-books, and to have our directors awakened to a greater interest in matters pertaining to the schools. However, for the present year, we can not complain.

Every thing considered, we are progress ingremarkably well, and judging from the improvement in the past few years, we hope in a short time to have means sufficient to run our schools at least five months in the year, with good teachers and the blessings which always result from continued good schools.

HARDEMAN COUNTY.

A. J. COATES, SUPERINTENDENT, *Bolivar.*

In obedience to the requirements of the law, I herewith submit my second annual report of the public schools of this county.

From the statistical reports it will be seen that the free schools of this county are in a better condition than they have been since the establishment of the system. Since my election to this office I have worked to create a better feeling towards the public schools, and I think, to a certain extent, I have succeeded. There is more interest now taken in education in this county than I ever knew before. We are free from school debt, with a handsome balance in the treasury of \$5,009.66.

I think it should be the duty of the County Superintendent to approve the warrants before they are paid, for two reasons; first, it is utterly impossible to get the teachers to report as the law now stands; second, the funds ought to be better guarded.

The public school system has but little opposition in this county.

HARDIN COUNTY.

JOHN T. DAMRON; SUPERINTENDENT, *Savannah*.

In submitting this, my fourth annual report, it gives me pleasure to state that our public schools in old Hardin received a perfect boom in January last by the County Court increasing the school tax from twenty cents to thirty-five cents, and I am satisfied that the present rate will not be decreased, but rather increased.

The gradual increase of interest taken on the part of our people is manifest. We must now have teachers of better qualifications, better school houses, and work up our directors, so that they will brighten up and keep everything in order.

The County Superintendent's salary should be regulated by the Legislature. They should approve all school warrants before paid by the trustee. Each civil district should have one board of directors.

We would be proud to have Superintendent Paine as State Superintendent two years longer.

HAWKINS COUNTY.

W. A. SHEFFEY, SUPERINTENDENT, *Rogersville*.

In presenting my annual report it affords me satisfaction to be

able to make it somewhat more complete and reliable than I could do a year since.

With very few exceptions I visited all of my schools at least once and some oftener. I found the majority of them in as good condition as could reasonably be expected under the circumstances.

We sadly need more money and better houses. With regard to the latter we are, however, improving, a few good, suitable houses being erected every year.

Our directors, in the month of July, adopted a series of text-books, or rather, in part, renewed an adoption formerly existing, and propose that said renewal or re-adoption be continued for five years; hoping to gradually secure uniformity, or a greater degree of the same than now exists.

HENRY COUNTY.

W. B. VANCLEAVE, JR., SUPERINTENDENT, *Paris*.

We are making some progress in the work of public schools; the dissatisfaction of previous years has nearly passed away, and the people are learning the value of free schools.

The delay of the report was caused by the school directors and teachers not making their reports of schools, as is required of them by law. The directors and teachers of my county have been very dilatory in sending in their reports. The law should be more strict in this respect.

Non-attendance and irregular attendance are great drawbacks to our free schools. I am in favor of a compulsory school law. This alone will educate all our children in the State.

I am also in favor of our Legislature passing a law adopting a uniform system of text-books for five or more years. This for a while might work a hardship, but in the end would be greatly to the interest of education.

I believe that the law should compel every teacher in the public schools to attend as many as two institutes during each year. Teachers in my county cannot be induced to attend.

The good citizens all agree that in the free school system rests our only hope, as we are not able to educate our children by private

means. The future of Tennessee will be whatever her free schools make it.

County Superintendents' salaries should be regulated by the Legislature. There is no uniformity in their salaries. Some receive sixty dollars and others \$1,200 per year, or more. I think the Legislature ought to regulate the salaries according to the scholastic population and number of schools in the county, and require the Superintendent to visit all the schools. Say two cents for every child enumerated; two dollars for every school visited, and one dollar for every applicant examined or something, according to the work performed.

The Legislature ought to regulate by law the minimum number of children to constitute a legal school district. In parts of this county the interest is very materially damaged by very small districts. My experience is that no school district ought to have less than sixty children in it, and that no school ought to be allowed to continue in operation when the daily average attendance falls below one-third of the resident number of children; for it costs as much to have ten children taught as it does forty.

Have the Legislature to enact a law that will give the Superintendent well defined authority, and require of him the performance of specific duties.

Let the Legislature pass a law to have all the public schools in a county taught the same number of days.

We need a fund for the purpose of having a normal school every summer, to prepare teachers for the work of the public schools.

I have visited one hundred and four schools, and delivered as many addresses, and have ridden two thousand miles during the past scholastic year.

Our County Court promptly levied the school tax. It is now thirty cents on the one hundred dollars' worth of property.

In conclusion, I would say that I have discharged my duties the very I best could, regardless of the small salary allowed me by the County Court. My report has been made from actual personal effort in visiting the schools, and can be relied upon. I trust it may give entire satisfaction.

The State Teachers' Association, which was held in Paris on October 2, 3, and 4, was a grand success, and will be of immense value to

the public schools of Henry county. All praise to Capt. C. S. Douglass, yourself and others. Come again.

HOUSTON COUNTY.

I. F. McMILLAN, SUPERINTENDENT, *Erin*.

I submit my annual report of the public schools in this county, and can say we are improving, both in teachers and in the mode of teaching. I am sure that in a few years, at furthest, our schools cannot be excelled; for we are determined to use all energies to get the inferior teachers out of the county, and when that is accomplished, our schools are a success.

HUMPHREYS COUNTY.

T. F. MCQUAID, SUPERINTENDENT, *MoEwen*.

My report is incomplete, and I have been delayed in making it on account of the indifference of directors in reporting to me. There are four districts that failed to report, and three furnished only incomplete reports. This, I presume, has been caused more from neglect than from the indifference of the directors.

The people of this county are much interested in schools and the education of their children; so that when the short term of our public schools has expired, and a neighborhood or village school has offered educational facilities, parents bring their children, as if ever anxious to receive the benefits of an education.

We have some very good school-houses in this county, but in many instances they lack the furniture necessary to aid the teacher in imparting instruction. Some houses have no blackboards, and mostly all are without maps and globes.

The teachers are active workers, who have qualified themselves for the noble work of imparting instruction, and though their pay is small, yet they work with a will not surpassed by the best paid professors.

County Superintendents have no way of compelling teachers to furnish their abstracts, since the Legislature repealed the law which

required school warrants to be signed by the County Superintendents before being paid by the trustee. By that means the County Superintendent had it in his power to collect those statistics necessary to make his report. I hope our next Legislature will consider this, and also the necessity of blank warrants in book form with stub attached. The amount paid each teacher or district can be placed on this stub, and by this means the County Superintendent will know the amount paid each district in his county by the trustee—said books to be furnished to County Superintendents, so that all school warrants must be issued by him.

JAMES COUNTY.

W. F. ANDERSON, SUPERINTENDENT, *Ooltewah.*

I have the honor herewith to submit my annual report as Superintendent of this county. I hope you will pardon the delay. I would have reported ere this but for the tardiness of the trustee and some of the clerks of the districts. I had to attend in person to getting some of the statistics required.

I have visited all the schools *but two*, some twice and some three times. I am glad to report that we have had a more competent corps of teachers the past year than usual, and the fruits are clearly visible from the fact that the pupils have made greater progress, besides better attendance. The patrons are growing more and more in favor of the public school system. They have become convinced that it is the only means by which the masses can be educated. The people are beginning to see that it is much better to educate the masses, thereby enabling them to develop the great resources of the country, making them self-sustaining, intelligent and good citizens, instead of supporting them as paupers and inmates of the prisons. In this county we have but eight (8) paupers, at an annual cost of \$600, *all perfectly illiterate*, which, at our present rate of tuition, would pay the tuition of 130 pupils ten months out of every year. Seven-tenths of the crimes are committed by illiterates. We all know something of the cost to tax payers of criminal prosecutions.

I am in favor of the State levying a school tax and disbursing to the several counties, according to the scholastic population. I would be in favor of some moderately compulsory system.

I am in favor of re-enacting the law requiring the signature of County Superintendents on all warrants issued for school funds in their respective counties, thereby enabling Superintendents to show clearly what disposition has been made of the school funds, and insuring prompt reports from the clerks and teachers of the several districts.

Our institutes have been attended by our live teachers. Our bread-and-butter teachers are fast becoming interested, as they have found it necessary to do, or quit the profession. They are reading up, taking among the best school journals, and using the best books they can find on teaching.

What we need now is more money to build a few more school-houses, and fit them all up with the essential apparatus. I consider apparatus almost indispensable in a school-room. The best mechanic or the best farmer can make but little progress without tools.

In conclusion I would say that James county schools are doing well. I am glad to be able to report considerable advancement over any previous year, and that some of our teachers are equal to any that have not had more experience.

I must return thanks to our worshipful County Court for the generous and liberal support of our schools.

JEFFERSON COUNTY.

W. L. CATE, SUPERINTENDENT, *Flat Gap*.

I herewith submit my annual report of the schools of Jefferson county for the year ending June 30, 1884, and in so doing I have to beg pardon for delay. I think I can offer for an excuse a defect in the school law, which I hope you will bring to the attention of the next General Assembly. The defect is that school *warrants* do not have to be approved by County Superintendents; therefore giving them no power to collect the abstracts, which are needed in making their reports.

The schools of Jefferson county are in better condition than I have ever known them, but are not, by any means, what they should be. The wages of teachers are better than ever before. Average

daily attendance greater than ever before. We have fourteen graded schools in the county this year—never but two before. We think the foregoing facts are evidence of better schools.

JOHNSON COUNTY.

A. T. DONNELLY, SUPERINTENDENT, *Taylorsville.*

I have the honor herewith to transmit my statistical report for the years 1883-4. The report is as full and correct as I could make it from the reports before me. It has become almost impossible to get reports from school officers and teachers. I could get no report from the county trustee. Have never been able to get reports from the county trustees.

Our schools did very well last winter. The most of the schools for this year have opened. The outlook is very promising. The corps of teachers is good. Our graded or high schools promise to do well. They have a good attendance. Our school at this place is under the supervision of Rev. S. G. Ketron, a graduate of Athens College.

Our school fund is not as large as last year, but I think there is a disposition to supplement it in some districts.

The interest in education is gradually growing. Our high schools are turning out a number of good teachers. Prof. Ketron thinks of giving special instruction to those who are preparing to teach, which I think will be an excellent thing. I have been keeping up a column in our county paper on educational matters, which I think has had a good influence.

Taking all things together, our schools have been a success, and still promise to be in the future. We cannot afford to neglect this great interest. We must educate, no matter what the cost may be.

KNOX COUNTY.

J. R. SHIPE, SUPERINTENDENT, *Knoxville.*

Our schools are in a very prosperous condition. We need a sufficient school tax to continue them at least eight months in the

year. The most of our districts are supplied with good school-houses, and we now need funds to prolong our schools.

In my last report, I stated that the second district of Knox county was working under a graded system. The directors, teachers, pupils and parents were highly pleased with the change. At a meeting of the directors of our county, held last May, the subject of grading all the schools of Knox county was presented, and, after remarks from a number of the directors, a vote was taken, and it was unanimously carried to grade the schools of our county. A committee was appointed to prepare a course of study and rules for the government of the public schools of Knox county, and to present the same to the different district boards for their approval. The committee did as directed, and we had their report printed and supplied each family of the county with a copy of the same. Having done this before the schools opened, we had but little trouble in getting the most of our schools to adopt it. We are highly pleased with it, as it gives us systematic work.

The State Normal at Knoxville did much in the way of preparing our teachers for more efficient work. A majority of our teachers attended said Normal and were well pleased with the plan by which it was conducted. Prof. Dinwiddie seems to be the right man in the right place.

The Normal for colored teachers was very efficiently conducted by Prof. G. S. W. Crawford. Nearly all the colored teachers of the county attended it, and are tolerably well qualified for their work.

The Knoxville city schools are prosperous, and merit the confidence the people repose in them.

LAKE COUNTY.

L. DONALDSON, SUPERINTENDENT, *Tiptonville*.

I herewith submit my annual report, embracing the public and private school statistics of my county, to which I append a few remarks.

Owing to disastrous floods it will be seen that the population has decreased within the last year to my regret. This is a natural con-

sequence of people having to leave certain overflowed sections of my county, especially near the Mississippi river.

It would be highly advantageous to our school system if the grade of qualifications of teachers was made to depend on other branches of study than those now required—such as English History (which is a part of our history) and some of the natural sciences. Geology of Tennessee is required to be taught, yet it is a striking fact to all and every one that it is ridiculous to teach “Geology of Tennessee” before acquiring some knowledge of the principles of “geology in general.”

LAUDERDALE COUNTY.

HENRY SANFORD, SUPERINTENDENT, *Ripley*.

I herewith submit my annual report of the schools of this county. You will doubtless notice that the enrollment and average attendance for this year are not as great as they were last year. There are several reasons for this; the most prominent is that last year some of the districts spent the whole of their income, and two of them went in debt. The past year they have been more cautious, and have had but few schools opened in them, yet, I must confess, that there is not that strong feeling among the people as that which animated them twelve months ago. The people wish and demand that the money paid by them shall be faithfully accounted for, and unless this is done their affection for and interest in our school system will decrease year by year. Therefore, I again earnestly call your attention to the necessity of an amendment of the school law by the next Legislature. As the law now stands, the school fund is in a state of “orphanage”. Orphans generally are plundered by sharpers. No one is now authorized to call defaulters to an account. Even if the suggestions made in my last report are adopted, there ought to be authority given by law to some one, and it ought to be made his duty to examine into the condition of the school fund of each county in the State, and where a defaulter is found require suit to be brought.

LAWRENCE COUNTY.

W. K. LACKEY, SUPERINTENDENT, *Lawrenceburg*.

In making to you this my second, and perhaps last, annual report, it is my earnest wish to embrace in it only that which seems to me of *real* importance, but if I say too much I know you will excuse me.

In visiting the schools of this county, both last year and this, I have carefully noted the progress and the general condition and management of our public schools, and after a critical review of facts, I am prepared to say that the schools, as a general thing, are progressing fairly, considering the disadvantages under which many of them are compelled to labor. I find several very serious obstacles in the way, which must be removed before our schools can accomplish the desired results. Among these I may mention the following as most prominent:

Many of our young teachers lack that important element so necessary to successful school work, to wit: practical experience in the management of the school. It is impossible to secure experienced teachers for *all* the schools, and I cannot see but one way to supply the deficiency. If the Legislature would establish a normal school in each county every year, for one month, or even less, and require every teacher in charge of public schools to attend one or more sessions, or forfeit their certificates and positions, we would soon hear no more cry of "wasted money!" The cost of such a school would be very little, compared with the vast sums wasted upon inexperienced teachers.

The next obstacle in the way is the lack of suitable houses and apparatus, so necessary to sure and rapid progress. This year I have visited nearly every school in the county, and I may safely say that fully one-half of the school-houses are totally unfit to teach any but a short summer term in. The people will not build comfortable school-houses at their own expense, only occasionally; and the public-school fund is not sufficient to build houses and support schools at the same time. So what must we do to remedy the evil?

Another great hindrance to progress is a want of suitable books. No uniformity in any of the schools! Many of the books in use are of forty years ago. People are slow to purchase school books, even when they can obtain them at half price, and have their schools

well classified. Some schools have a dozen different kinds of arithmetic, grammar, geography, etc. What a loss of time in teaching, and therefore waste of money to the people! Yet, how can we help it? Will not our Legislature take it in hand and adopt a uniform set of school text-books for the entire State, say for eight or ten years? This, I am certain, would be one of the very best things to facilitate the labor of the teacher, and add to the future prosperity of our school system.

One other very serious drawback, and perhaps the most dangerous one, is *non-attendance*. The people have, heretofore, complained that the school term was too short to accomplish any material good, and many of them have kept their children from the school on that excuse. To remedy this defect our County Court promptly levied a sufficient tax last January to extend the term to nearly five months, thinking thereby to secure a larger attendance in schools. But, lo! the attendance this year is little better than last! Now this is *the* point which I think ought to engage the profound attention of every member of our State Legislature. A law should be speedily enacted to compel parents and guardians to send their children to the schools. They are forced, by law, to pay taxes for the support of public schools, and why should not the same power and authority be exercised in bringing the children of the country into the school-room to receive the instruction *so necessary* in preparing them for the great duties of life? Several schools in this county closed this year in about one month after opening. Lack of attendance, through contrary parents, was the sole cause. Now a compulsory law would certainly remedy such evils, and confer upon the child what is justly due it—a reasonable education.

I wish every child in our beloved country a liberal education; every worker in the great cause a brilliant and successful career, and that Hon. Thos. H. Paine may long remain our State Superintendent.

LEWIS COUNTY.

F. A. PLUMMER, SUPERINTENDENT, *Newburg*.

I have the honor herewith to transmit my second annual report, which has been necessarily delayed on account of the failure of

some of the district clerks to furnish me at the proper time the scholastic population of their respective districts, the mere statement of which, I trust, will fully apologize for my apparent indifference in the discharge of this very important duty. I am pleased to say that my report is as correct as can well be made. When I first assumed the duties of County Superintendent there was a great deal of confusion and contention in almost all the districts of the county, occasioned by the multiplicity of directors, there being in some districts as many as fifteen directors, but in none less than six. To reduce the number, as well as to put the districts in better shape, I asked the County Court to redistrict the county and make thirteen instead of eight school districts, which was done, and the problem as to who were directors was settled by appointing others, and, I am gratified to state, this arrangement was satisfactory to all, and doubtless gave rise to a great deal of interest in the public schools.

Since redistricting the county I have succeeded in inducing the County Court to increase the tax upon property from 10 to 20 cents upon the hundred dollars, and to levy 50 cents upon polls. With this fund, our schools next year will be about five months' duration, and no doubt the next annual report will show great improvement in the schools of our county.

A series of text-books have also been adopted, and are now used by all the public schools, which I deem the most significant movement towards general education. The teachers are better paid than heretofore, and are interested in their schools. The former dissatisfaction has entirely subsided. Public schools are popular and the people are willing to be taxed for education. This is as it should be, and I trust the time is not far in the future when the blessings of free education may be fully disseminated throughout our county, the people realizing fully the beneficent intention of the law-making power of our State.

LINCOLN COUNTY.

H. T. WILLIAMS, SUPERINTENDENT, *Cyrusdon*.

I have the honor of submitting to you my second annual report, I have been delayed a few days in my effort to get up one correct

in every detail. I have spared no pains on it, and you may rely on the result.

You will see some improvement on last year in every respect. District clerks have been very careful in numbering the children, hence the increase of population. The teachers have taken much more pains with their abstracts, hence the increase of enrollment and daily attendance. Another grand reason for the improvement is, that the people have manifested more than usual interest in the schools, and teachers generally report the attendance more regular.

But I think matters are far from satisfactory yet. Only sixty-six children in every hundred attend school at all, thirty-four never see inside the school-room, and only fifty in the hundred are regular attendants. The alleged cause of this is poverty; the real cause is indifference on the part of parents. Generally the class that is not able to buy books and clothes for the children can afford to smoke, chew and drink, and lounge most extravagantly. In July and August the children cannot be spared from home to attend school; in October, homes, cotton fields, and all are frequently left to attend first Mondays and big shows; even the parents are carried along. No doubt many children get more education at shows in a single day than at a whole term at school. Of course, the State pays their tuition by and by in prosecutions and pauper fees. I have taken hours to discuss these things with the thoughtful tax-payers of our county. The remedy is compulsory attendance.

Prof. W. R. Morris, of the Fisk University, conducted our colored institute last June. The attendance was fine, and his work strictly first-class. He succeeded in arousing our colored teachers to a pitch never before attained. They kept up a regular monthly institute during the school term.

The yearly institutes for white teachers of the county lasted a week, our home forces doing the work. They did it, too, to the satisfaction and pleasure of the large number of teachers and friends present.

On the whole, our schools are doing well comparatively speaking; peace and quiet, zeal and harmony, prevail among the patrons. Our teachers are alive and doing their best, and in many instances almost insuperable barriers are being surmounted. Nearly every teacher in the county takes a live school journal—some two or three.

Most of them have works on teaching, and thus a live institute is constantly in session. The present indications are hopeful; the frozen soil is broken; I trust a better day dawns. The Lord make us faithful and patient in every good work.

I almost forgot to tell you that in addition to our county institute, which meets once a month, the teachers of the southeastern portion of our county have, with some of the teachers of Moore and Franklin, organized and successfully conducted another live monthly institute. Also, since June, one of our county papers allowed us one column per week. Several of our teachers have filled the position of editor creditably. This move is arousing parents and general readers on the important matters of schools, teachers, houses and furniture, as well as educational matters in general.

LOUDON COUNTY.

JOHN W. HYDEN, SUPERINTENDENT, *Loudon*.

I am a little tardy with my report this year, for the reason that the county trustee has been late in making his report. I find it a difficult task to get school officials and teachers to make their reports promptly.

The average duration of our schools last year was four months. This year we will average four and a half months. Our schools are in a very healthy condition.

County normals and district teachers' institutes have done much good in our county. This year we held a county normal of three weeks, and have held district teachers' institutes in every district.

Loudon county is booming; the people are interested and public opinion approves of the public school system. We have good school-houses in every district, and a very good class of teachers.

MACON COUNTY.

J. W. KING, SUPERINTENDENT, *LaFayette*.

I have the honor to submit to you my second annual report, though with more difficulty than was anticipated. The directors

were very late in furnishing me with their reports; but I have them at last. Our schools in session this fall number fifty-five—fifty white and five colored. They are doing splendidly, with few exceptions. The enormous tobacco crop in the county was detrimental to large students to some extent.

We still improve in teachers. We have two schools in the county of ten months each, one academic and one private school, which are furnishing the county with good teachers. The people continue to manifest an interest in schools, more so than ever before. Harmony exists in the county in regard to schools with one exception only, which, seemingly, it is impossible ever to settle. Prejudice is master in the matter. I think the time for electing school directors should be changed from our regular county and State elections.

The Legislature ought to enact some law that would require teachers to attend normal schools or teachers' institutes. I also think they should say what County Superintendents should receive for their services, as our courts do not look at the matter in its right light.

Our County Court assessed each teacher for certificate, two dollars (\$2.00), which goes to pay me for my services. My salary for 1883-84 was one hundred and fifty dollars (\$150).

We had a very interesting teachers' institute last July, at which twenty-one teachers were present. It continued four (4) days. Professors Washburn, of Jackson county; Bray, of Clay county; Dixon, of Allen county, Ky.; Harlin Heeter and Shelton, of Macon county; and our Circuit Court clerk and J. S. Wooton, one of our former County Superintendents, gave me their assistance, which was highly appreciated. Our institute was a grand success. Many questions of vital importance were discussed in the institute. The good people of Fayette extended their hospitalities to the members of the institute, and call for another one to be held in Fayette next year, for a longer term.

MADISON COUNTY.

W. G. COCKRILL, SUPERINTENDENT, *Jackson.*

I take pleasure in submitting herewith my fourth annual report of the public schools of Madison county.

I have done my best to get up the teachers' abstracts and directors' reports, but have failed in some districts to do so. In the defaulting districts I referred to reports heretofore made.

The scholastic population was reported in due time, and shows a gain over last year.

I am opposed to a frequent change of teachers. During our fall session of 1883 I advised the directors to employ their best teachers to teach the spring session in 1884, in their respective school-houses, which has been done in many cases, with good results.

I report the two sessions to be one school and one teacher, which shows a large falling off in the number of schools and teachers. Considering everything, our schools have done very well this scholastic year.

Our financial condition is excellent. We have \$6,707.21 on hand, and no outstanding debts.

Our city public schools, M. C. F. Institute, S. W. B. University, and Taylor Institute (which are not noted in my report), are popular institutions of learning, and have been and are now being liberally patronized.

I do hope the next Legislature will relieve the public school interest and County Superintendents from the miserable dilemma the school acts of 1881 brought on us. I think County Superintendents should call the attention of their Senators and Representatives to the foregoing act, and demand relief of them. I will make this demand of my Senator and Representative, and endeavor to elicit their support in the matter.

MARION COUNTY.

S. B. DEAKINS, SUPERINTENDENT, *Jasper.*

I fear my report is late. I could not get a report from the trustee, hence the delay. I hope the Legislature will enact some better way of enforcing returns from school officers.

My schools are in fine condition. We can run five months, and have some money left of the 1883 tax. We will have all the 1884 tax for our 1885 schools. I never allow the districts to get behind.

MAURY COUNTY.

W. R. McKENNON, SUPERINTENDENT, *Columbia.*

In submitting my report for the scholastic year ending June 30, 1884, I have to say that, while it is imperfect, yet I have spared no pains to have it as near correct as possible.

You will observe that the estimated value of all school property is less than last year. This is caused by small improvements this year, and some property valued last year that did not belong to the county.

I did hope by this time to be able to report money increased, and the schools running at least five months, but we failed. We do not intend to despair, but will keep it before the people until they hear and heed.

We are satisfied that there is an increased interest in favor of common schools, because they are better attended, and by all classes.

While we have many good men as school directors, yet many of them do not take that interest in the work that they should, and thus hinder our progress. Better school men might be selected if the election of school officers was not appended to other elections, and therefore made about a third, fourth or fifth consideration by the voters; or, if considered first, only to barter to gain some other end.

Teachers' institutes are in great favor with the people and teachers. We think they are doing some good. Teachers in our private schools give us great assistance.

I have failed to give any report on private schools, because so few of the directors gave me any that it was impossible to have it any ways near correct.

McMINN COUNTY.

W. C. HAFLEY, SUPERINTENDENT, *Athens*.

I submit you a partial report, as there is no law to compel directors and teachers to send in their reports. I have not only been delayed, but cannot report to you the scholastic enrollment of schools, their average attendance, or what studies were pursued. Certainly our Legislature will take some steps to remedy these evils.

You will see that our scholastic population has increased 245. We have had good schools. We need legislation on a few things. We need a law compelling the building of good school-houses; compelling the adoption of one series of text-books; a law requiring directors to be educated men; a law sustaining Superintendents in holding institutes, and *defining* his duties; then there should be some provision by which, when he does, he can get his pay.

During this year I held only three institutes, as our County Court ruled me out of order. I am glad, however, that you reversed their decision.

All the enterprising educated citizens of the county have given me all the encouragement and assistance they could, for which I am under many obligations to them.

The action of our court in ruling that teachers could get certificates without attending normals or institutes did our school work more harm than anything we know. All the leading teachers were for the normals and were assisting in them; but when the court interfered, treading upon ground they had no right to, all the good that had been done fell to the ground and a grade of teachers that should have stood back stepped in. I suggest that this normal work have no uncertain sound; let teachers know that they *have* to qualify themselves.

To sum up: First, we need better houses; let us have some law on this. Second, we need better teachers; make it a definite duty for County Superintendents to hold normals. Third, we need a more intelligent set of directors; let it be required that directors be qualified. Fourth, we need more regular attendance in school; let us have some kind of compulsory school law. Fifth, we need one

series of text-books; let us have a law to that effect. And, lastly, let us have a lot of professional teachers, *whose hearts are in the work*, and then let us pay them.

McNAIRY COUNTY.

LINDSEY SANDERS, SUPERINTENDENT, *Purdy.*

I have the honor to transmit my third annual report as Superintendent of public instruction for McNairy county, for while I do not claim any special merit.

It is with pride I can say, our county has made wonderful progress in education in the last three years, the progress has been so great, it has been commented on by all. When I entered on my official duties three years ago as Superintendent, our schools were at a fearful discount, with a strong and well organized opposition, who denounced our free school system openly as a failure, with but a few school-houses worthy the name. All of this has been changed; instead of old, dilapidated log houses, we have neat, frame school-houses in nearly every district, with money enough for four or five months school in each district. We might say, our schools are on a boom. All opposition to them, has been buried in the great ocean of the past, and they have the confidence and earnest support of all classes of our citizens. No other county can boast of a more earnest, noble, self-sacrificing and enthusiastic corps of teachers than McNairy; and by their untiring zeal and devotion to their profession, they have awakened an interest in the cause of free education in this county that has permeated every pore of society.

Our teachers' institute has been a powerful engine in the hands of the teachers in arousing the dormant energies of the people, and enlisting them in the cause of free education. Our schools were very satisfactory this year. We issued more first-class certificates than in any previous year. Our enrollment was larger, and daily attendance exceeded any former year, though our report may not show it, owing to many teachers failing to hand in their abstracts.

All our county lacks in being second to none in the State in edu-

ational interest, is in not having her free schools graded, which I think will be done by the opening of our schools next summer.

I feel that I should thank the teachers, pupils, school officers and the citizens generally in this public manner for courtesies shown me while in the performance of my official duties. I can assure them that such kindness will never be forgotten.

MONROE COUNTY.

N. H. KIMBROUGH, SUPERINTENDENT, *Madisonville.*

I herewith submit my annual report, which is full and complete, financially and statistically.

Our schools are improving slowly, but gradually making progress in the way of many improvements. Teachers are earnest in their vocation. We surpass all adjoining counties in running our public schools financially, always paying our teachers promptly. No county in East Tennessee can beat us for good comfortable school-houses.

By proper legislation and good management our public schools can be made to become the great bulwark of our free institutions.

MONTGOMERY COUNTY.

J. MILLER, SUPERINTENDENT, *Clarksville.*

In submitting this, my second annual report, it gives me pleasure to state that everything pertaining to our public schools promises success in our county.

Increase of interest in favor of public schools is manifest throughout the county. The schools generally in the county are in good condition. I think all opposition to the schools is about dead, and that they are taking firm hold on the hearts of the people of our county.

I visited about seventy schools, and found them doing good work.

At the time of the last election the people manifested much earnestness in the selection of good men to the office of school directors—an indispensable factor to the success of our schools.

A greater disposition upon the part of directors to secure well-qualified teachers, and to establish graded schools, is manifest. I favor the enactment of a law compelling teachers to attend institutes. I have no trouble in securing the attendance of our best teachers, but our less competent teachers do not attend well. The improvement in school-houses is very gratifying. We have completed this year several well-arranged and commodious houses, and others are in process of construction. The directors of our county are fully awake to the necessity of building good houses, and consolidating small schools.

The County Superintendent should be made to approve the warrants before they are paid by the trustee. This would enable the Superintendent to obtain correct and prompt reports from teachers and directors.

We are in good financial condition, free from school debt, with a balance of \$14,589.08 on hand July 1, 1884.

MOORE COUNTY.

A. G. RUSSELL, SUPERINTENDENT, *Lynchburg.*

My report has been delayed because of the utter impossibility of my getting reports from teachers and directors, and is not made up to exact figures.

I must complain of the inefficiency and carelessness of directors, who, in a great many cases will never furnish reports, employ teachers at the lowest prices, and in many instances employ them without certificates.

Again, the low tax of our county prevents any good results being accomplished on account of the short terms taught. A tax should be levied to extend the sessions to at least five months, and then we might reasonably expect a great and rapid improvement in our educational interests.

I believe that a law should be enacted to compel careless parents to send their children to school. Many parents are depriving their children of the benefits of schools, and permitting them to grow up in ignorance. A law should be enacted forcing such parents to do their duty.

I have visited nearly all the schools of the county, and discharged to the best of my ability my duty.

Only first and second grade certificates should be granted to applicants. A uniform system of text-books would be, in my opinion, an improvement in our school system.

MORGAN COUNTY.

J. S. STAPLES, SUPERINTENDENT, *Hunnicut's Station*.

In submitting to you my second annual report, I have to say, that it is not exactly correct in every particular. Teachers, in a great many instances, have failed to return their registers or abstracts, consequently, the clerks were unable to make full reports. In making my financial report, I had to rely more on the chairman of the County Court, than any one else, as the trustee has not been keeping his books so he could make a correct report. Instead of having a balance of \$519⁷²/₁₀₀ on hand, when he collects the back taxes we will have between \$1,500 and \$1,600.

We have more schools in operation at present than ever before.

OBION COUNTY.

W. A. HARRISON, SUPERINTENDENT, *Troy*.

I transmit, herewith, my annual report on the educational condition of Obion county. This report has been prepared with a view to almost perfect accuracy and is, at least, in its general details, correct.

In my report for the scholastic year 1882-3, I ventured to suggest the wisdom and propriety of the enactment by the Legislature of the State of Tennessee, of a compulsory school law. My views in this regard have undergone no change, and they are in a great measure supplemented by the reports of my teachers for the current year.

In this connection I may here state that an increase in the levy of State tax for educational purposes would meet with the approba-

tion of the most influential men in this county. The court readily and unanimously assesses as high a tax for school purposes as the law permits, and would, were it not in violation of law, levy a sufficiency to maintain the public schools of the county for at least a term of nine months in the year.

PICKETT COUNTY.

J. L. CHAUNCEY, SUPERINTENDENT, *Byrdstown*.

In making my report to you I will say, had it not been for the assistance of the statistical text-book you sent me I could not have made a correct report to you. The teachers in our county are very slow sending their reports to me. Had I not visited the schools and taken the statistics myself, I could not have made this report.

Our schools are improving. We have a fine school in Byrdstown. When our schools expired last year the teachers entered at Byrdstown Academy, and when they were examined this year I found they had made great improvement, and upon visiting the schools I found them much improved. We have better schools now than we had in 1883. Our schools are better attended, the pupils are more regular, and the patrons are taking more interest in them, and are more engaged in education than they were last year.

We need more and better houses for our schools. We are not well supplied with text-books. Our county is young, and our citizens are heavily burdened with taxes to pay for our public buildings, but as soon as they are able they will turn their attention to building houses for their schools.

We held an institute, which opened on the 2d day of September and continued four days. Our teachers, with one exception, all attended. We had a crowded house, and good order, and our teachers were interested and did good work. Professors Capps, Chowning and Turner conducted the institute, and were assisted by Professor Jones, from Kentucky. Our teachers were all alive to the cause of education, and the spirit of improvement. If they continue in the same spirit till next year we will have good teachers.

In conclusion, I must say for our county that the people are taking more interest and working more zealously and doing more in every way for the advancement of our schools than they have ever done before.

PUTNAM COUNTY.

A. BRYANT, SUPERINTENDENT, *Byrne.*

I hereby transmit my annual report for the year ending June 30, 1884. It is as correct as I could make it, as the trustee has not reported to me.

I think the schools of my county are getting along very well. Owing to lack of funds, some schools are necessarily short. There is some confusion among patrons and directors in some localities. I think our school laws should be amended so as to elect directors by the people of the districts, at any time a vacancy occurs. Let the clerk be empowered to open and hold elections for that purpose upon notice the same as the sheriff. Also, I think our scholastic year should begin and end with the calendar year. In the shape it is in now, it is very imperfectly understood by many directors, and even trustees, thereby causing many incorrect reports to be sent in. Our common calendar year almost invariably includes both the spring and fall terms of our schools.

RHEA COUNTY.

N. Q. ALLEN, SUPERINTENDENT, *Washington.*

The free school interest in Rhea county is gaining ground every year. Houses are being built, more schools and better teachers, increased attendance and longer terms, are some of the well defined evidences of progress. Legislation is needed, and badly needed, giving County Superintendents more power over school directors and teachers so that incompetent directors may be made to "step down and out," and teachers be made to conform to directions of the county board in regard to text-books.

ROANE COUNTY.

H. F. WHEAT, SUPERINTENDENT, *Kingston.*

I herewith enclose my annual report. The educational interest in this county has been making such progress during the last few years that she now stands towards the head of the list, but the friends of education within her borders are determined to make her rank still higher. She is advancing.

Our Normal Institute was a decided success. We have held annual normal institutes for the last six years, and we have thought they were all good, but it is universally conceded that our last was the best we have had. We believe it was conducted upon the principles of a *true* normal school. Rev. S. W. Tindell, president of Carson College, was with us, and rendered invaluable service.

My statistical report is, I believe, about correct. I have been holding educational meetings at different points throughout the county, which have been well attended and a deep interest manifested. These meetings seem to have a salutary influence in working up the educational interest.

We have in the field a number of live, energetic teachers—teachers that are ready to take hold of anything that will enhance their efficiency in the school-room.

We are agitating the subject of graded schools, which, I think, will result in the adoption of a system of grades applicable to our common schools, and that can be made uniform throughout the county.

RUTHERFORD COUNTY.

REESE H. HENDERSON, SUPERINTENDENT, *Murfreesboro.*

Enclosed find my report for the year ending June 30, 1884.

During the year some of the schools in the county were not conducted for the want of funds, the districts being in debt, and in all such cases I advised the directors to first get their districts out of debt, as a debt was a great hindrance to the prosperity of their schools.

In some of the districts consolidated schools are carried on, and

reports from them are very satisfactory. Other districts are debating the question of having consolidated schools.

In the Murfreesboro district the directors are preparing to adopt the normal plan, and it meets with the approval of the citizens of the district, and as soon as suitable buildings can be erected, the normal plan will be adopted.

Owing to a want of funds, the schools were not conducted as long as they should have been to be successful; but as the county tax for school purposes has been increased, it is hoped that the schools throughout the county will be able to run six months, at least.

The teachers throughout the county are discharging their duties acceptably, and be it said to their praise, there has not been a single complaint against any of them during the year on account of incompetency.

Most of the school buildings in the county are in good repair, and I have used every effort to induce directors to properly prepare school-houses for teaching; to have plenty of desks, seats, maps, blackboards, etc., and in every possible way endeavor to make the school-house attractive to scholars.

There is really no objection to the public school system in this county, although deficient in many respects. All who have children they wish educated, readily overlook the defects, in consideration of the many advantages afforded, and be it said to their praise, the magistrates composing our County Court are heartily in favor of public schools, and have been very liberal in assessing a tax sufficient for their support.

The pro rata paid by the trustee amounted to \$2 per scholar, though for the incoming year, he informs me that he thinks the pro rata will be \$2.25 per scholar, which will admit of the schools being continued longer next year.

SCOTT COUNTY.

JAMES H. JEFFERS, SUPERINTENDENT, *Huntsville*.

I have the honor herewith to submit my annual report for the year ending June 30, 1884, which is as full as I could make it

from the reports before me. It has been a very difficult matter to get reports from directors, and in many instances I could not get teachers to fill out their abstracts in proper time; and, in fact, did not get some of them at all, simply because their last month's salary was paid off without any questions being asked, and some of them being citizens of other counties, after the expiration of their term, they returned home without making any report whatever.

Our schools are in good condition, and are supplied with teachers who are perfectly alive to the work.

We have one high school in this county at Huntsville.

I have visited nearly all of the schools in this county, but unfortunately could not reach all of them up to this time, yet I hope I will be able to reach them before the schools terminate.

This report is incomplete on account of not getting a report from the trustee. I have been wholly unable to get anything whatever from him concerning our school expenses.

SUGGESTIONS.

1st. Re-enact the law of 1879, requiring County Superintendents to approve school warrants, so it would give him a right to withhold his approval of warrants until the teacher makes his report.

2d. Enact a law that will give the County Superintendent well defined authority, and require of him the performance of specific duties, and let him have his compensation determined by the actual time spent in looking after the public interest of his county.

3d. Let the Legislature levy the school tax on property, polls, privileges and litigation.

4th. Require all public schools taught a certain number of days.

SEQUATCHIE COUNTY.

JOHN E. DEAKINS, SUPERINTENDENT, *Dunlap.*

The public schools of this county are surely, though slowly, rising in the estimation of the people. Our County Court does not lay a tax large enough to continue our schools a sufficient length of time; we need more money and longer terms.

Our schools have not been marked by any special prosperity during the past year, though the outlook is favorable. We have

had some good schools, taught by good teachers. The attendance was not as large as it might have been, owing mainly to a general want of interest on the part of those to whom the public schools are given.

I visited most of the schools in the county, and found them generally in good condition, and the people pleased with their progress. The general interest and appreciation of the public school system has gradually increased for several years, and the prospect is good for a continued improvement in the future.

SEVIER COUNTY.

P. A. WEAR, SUPERINTENDENT, *Sevierville*.

This, my second report, I am sure, is not correct, but probably as nearly so as it could be under existing circumstances.

While I have not the pleasure to boast of rapid progress in our schools, I can safely say that some progress is being made. Harmony should be the chief concern, and more harmony has prevailed during the last year than had usually.

DIRECTORS.

It is a mistake to think that a County Superintendent has supreme power in our public schools. While he can advise directors and have supervision of schools, it doesn't at all follow that he has the power to educate directors in a reasonable length of time; therefore, our most enlightened men should be our school directors. If this were observed, and properly so, I am sure Sevier County would commence a new era in the line of our public schools.

PATRONS.

One great deficiency is a failure on the part of patrons and parents in sending their children regularly to school. I find it impossible to have a good school where there is no regularity in attendance. The best remedy I have found under our present law is to have stated meetings, invite the parents to attend and address them on the subject, which is to their greatest interest. It is also well enough to notify the teacher of each school when you expect to visit the school, and instruct him to notify the patrons to attend.

I find this method consumes a great deal of time, but no Superintendent can realize the advantage until he gives it a trial.

TEACHERS.

Our teachers are well qualified to teach. I compel them, as nearly as I can, to attend a normal school somewhere. Those who are not able to attend the State Normal, have the advantage of attending the county institutes. Besides our institute before the commencement of our schools, we have one each month, and the teachers are alive to the work of teaching, and generally attend. This, alone, is encouraging, and teachers with such an opportunity always manifest a greater interest in the work of teaching.

BUILDINGS AND APPARATUS.

While some building and repairs have been in progress, we still have room for more. Our directors have furnished a number of the public school houses with outline maps and charts, and in the future not far distant, we hope to have them all furnished. Upon the whole, we are making slow, but, we hope, sure progress.

SHELBY COUNTY.

MRS. W. H. HORTON, SUPERINTENDENT, *Memphis.*

I herein enclose my annual report, which has been delayed by the tardiness of a few directors.

Having given my whole time and attention to my duties; that is, attending institutes and normals, learning the best methods of teaching, then holding institutes in various parts of the county and imparting these methods to the teachers, I find a marked improvement in all the schools. I find more interest manifested among directors, teachers, pupils, as well as patrons, than ever before, and especially with the colored race.

We have a "County Normal Institute," composed of more than fifty energetic, capable teachers, which meets once a month in Memphis for mutual improvement. We have a regular course of study in elocution and sight singing, besides the regular branches taught in our schools. We have another association which meets

at Bartlett, under the supervision of C. R. Barteau, and other prominent teachers.

The fall schools have opened with fine attendance. I am spending my time now in visiting them, assisting and encouraging both teachers and pupils.

I would like very much to have physiology introduced in the schools of West Tennessee in the place of geology. We can get no specimens, and it is almost impossible to get the pupils interested without them. Can you not so arrange it when the Legislature meets again?

STEWART COUNTY.

J. W. STOUT, SUPERINTENDENT, *Dover*.

I have to report a slow but sure progress of the common school cause. The opposition to our public school system has almost entirely disappeared. The greatest difficulty we now have to contend with is the disposition on the part of some of our directors to let out their schools to the lowest bidder, placing too little value upon the applicant's fitness to teach.

SULLIVAN COUNTY.

GEORGE R. ANDERSON, SUPERINTENDENT, *Blountville*.

The enrollment in the schools in this county last year was not as great as anticipated, or as I had reason to believe it would be. It is true, there is an increase in the enrollment of 397 over that of last year, and also an increase of 400 in the average attendance. If the people knew just how the greater portion of the school fund is obtained, I think this knowledge would increase both the enrollment and average attendance. It is called the public school fund, and many act as though they thought the entire amount was a gift, and only for a portion of the children. They do not realize that every tax-payer contributes something to this fund; and the poll-tax payer more than all others according to his ability, and yet,

these are the very men whose children remain out of school. I make it a point to present this matter in its true light as occasion offers. We must get the boys and girls into the school-room if we expect to benefit them.

If the approving power can be restored to County Superintendents it will increase their labors but place them in a position to know precisely how the school fund is expended. It was unwise legislation to repeal this act.

If the opening of the school year cannot be changed, the County Superintendent should be elected in July, instead of January. It does seem to me a bad arrangement to elect an officer, when half of the year in which he is expected to report has expired, and when it would be imprudent for him to make important changes that might present themselves.

The text-book question is still unsettled in this county, and if the Legislature can come to the aid of the County Superintendents in establishing uniformity throughout the State by the appointment of suitable persons to make the adoption, I believe they ought to do it. A great diversity of authors, such as we have now, is a serious drawback to the prosperity of the schools of the State. To meet the demands of the different teachers for their favorite authors is a tax that parents are much inclined to rebel against.

My statistical report is as correct as I could make it from the material furnished me ; teachers are too negligent about returning registers and abstracts.

TIPTON COUNTY.

P. A. FISHER, SUPERINTENDENT, *Covington.*

In submitting to you my annual report, I am exceedingly gratified to state that the public schools of this county have improved beyond my most sanguine expectations.

Our people should be, and I believe are, under lasting obligations to you and your able assistants for the invaluable instruction given to us during the institute held here in June last. A new impetus has been given to our schools since that time.

The Tipton County Educational Association, organized in 1882,
11—School.

under the leadership of Col. William Sanford, held a meeting in August last, and awarded prizes as follows: First prize, \$250; second, \$50; third, \$50; said prizes to be expended in the further education of the recipients in any school or college in the State.

The Tipton County Teachers' Association convenes at regular intervals, with a membership of about forty teachers. These meetings are held in different parts of the county, and are generally well attended by teachers, school officers and patrons.

The opposition heretofore existing to public schools has almost entirely disappeared.

New frame houses are fast taking the place of the old log.

First-class teachers are in demand. The people are willing to be taxed for the support of good schools.

I think I am justified in stating that our schools are rapidly improving. The only hindrance now seems to be lack of sufficient funds to continue for eight or ten months in the year.

TROUSDALE COUNTY.

JOHN M. PRICE, SUPERINTENDENT, *Hartsville.*

I beg pardon for delaying this report, and will say my desire to have it correct was the cause. I think it is so now, or at least as near so as it is possible for me to get it.

The schools in my county have been small this year, but they are doing very well with that one exception.

I have held no institute, for the simple reason I could get no assistance from the teachers, or not enough to make one interesting. Think I will do so next year.

The report, as you will see, shows only three first grade teachers. This is so from the construction I put upon the explanation at the bottom of the certificate, and holding that no teacher was entitled to a first grade that did not stand a perfect examination before me.

UNICOI COUNTY.

W. S. TUCKER, SUPERINTENDENT, *Erwin*.

We have been delayed some in making this report, caused by some directors not making their reports at the proper time. I do not think my report is entirely correct, though I have used every effort to make it as near so as I could under the circumstances. I have been troubled considerably in obtaining the necessary report from some districts in the county.

In some parts of this county we have a considerable interest manifested in public schools, while in others, we have the opposite. This, we think, is caused partly by the shape of the school districts. I think I will make an effort to get the county redistricted in order to have a more equal distribution of the school funds. In sparsely settled portions of the county it is almost impossible to realize any benefit from public schools.

UNION COUNTY.

S. J. LEDGERWOOD, SUPERINTENDENT, *Raccoon Valley*.

Enclosed find my annual statistical report for the past year. It is full and correct, except so much as may be taken from teachers' abstracts. It is almost impossible for me to get reports from all the teachers, inasmuch as they consider that there is nothing made to them, and consequently they are very inaccurately gotten up, if at all.

There is marked improvement in our schools over last year, and I think we are gradually improving. The minds of the people are becoming more awakened to the benefits to be derived from them; and another year, if the County Court reflects the sentiments of the tax-payers, they will levy a tax sufficient to run the schools five months in the year.

Without more money we could scarcely hope for better schools. Our county pays a tax of only ten cents on the hundred dollars' worth of taxable property for school purposes. This, together with the funds received from all other sources, extends our schools from two to three months. Some of the districts have no schools this year. They are building, and trying to get out of debt.

Could we be successful in raising a fund sufficient to run our schools from five to six months in the year, and our district directors cared to rightly appreciate the services of first-class teachers, I think our greatest barriers would be removed and our people would soon realize the blessings bestowed by good schools, which were anticipated and expected by the founders of the great common school system in Tennessee.

WASHINGTON COUNTY.

L. C. PEOPLES, SUPERINTENDENT, *Jonesboro.*

It will be seen from the report of this county that a high rate of school tax has been levied and collected. It is above the average of counties in this matter. But the public schools are too short to meet the wants of the people, and educate the rising generation. The Legislature should, by enactment, give more money for school purposes.

That section of the school law enacted in 1879, requiring County Superintendents to approve school warrants, as it is now repealed, should be re-enacted. By this means, gross abuse in the expenditure of the public funds would be prevented.

WAYNE COUNTY.

C. BUCHANAN, SUPERINTENDENT, *Waynesboro.*

Our schools were not all in operation last year, on account of the robbery of the iron safe of the county in February, 1883, in which the trustee claimed that \$2,532.36 school fund was lost.

The most of our schools are in operation this year, and are better supplied with teachers than in former years, and we expect the schools to continue until winter sets in, which will be longer than they have lasted heretofore.

The citizens throughout the county are taking unusual interest in the public schools. We have our school districts so arranged that every school-house is in or near the center of the school district, which gives more general satisfaction than under the civil district

plan. The former discontent has about subsided, and our people are willing for the County Court to levy additional tax to prolong the schools.

WEAKLEY COUNTY.

S. P. HARPER, SUPERINTENDENT, *Dresden.*

Owing to the sickness of our county trustee, I have been unable to get his report to me, hence the delay in making my own.

Having been elected to fill a vacancy, at the July term of the County Court, I have not had the time nor opportunity to secure prompt reports from the district directors. This also may be some excuse for my tardiness in reporting to you.

Our school finances are in a very good condition, school warrants being at par, or nearly so, and most of the districts out of debt.

The school interest in our county is gradually increasing and the outlook is encouraging.

WHITE COUNTY.

J. J. GRISSOM, SUPERINTENDENT, *Pollard.*

In submitting this, my second annual report, I am glad I can report general progress and interest.

In the first place, I commenced my work last year by keeping before the people and teachers, through our county paper, many of the educational needs of the county.

I have also shown them, or endeavored to show them, the practicability and general benefit of the public school system over the private; the advantages it offers to the poor, and the economy to the rich.

Now, when I tell them we have 4,304 children within school ages, our monthly expense for running the schools and giving all this number the opportunity of attending, is only \$1,591, the average cost of tuition per pupil per month is not quite 37 cents, for the number enrolled this year, 53½ cents, and for those in daily

attendance, about 71 cents, a great many seem astonished at these facts, and are ready to assist in public school work without further evidence.

Last year I talked on institutes to our teachers, and got some to reading educational journals, which showed them that they were behind in the march of educational progress, therefore, we had no trouble in organizing our teachers' institute early in August, at which the major part of the best teachers attended regularly. The institute meets every two weeks. We have practical class-work, with demonstrations of methods of teaching, discussions in regard to discipline, etc. So, I think, our teachers will be greatly improved by our institute work, which is still needed.

One of our great needs is more funds; another is to get it collected and properly disbursed, for we have had trouble and loss in re-collecting from every trustee since the war to the present term. This could and should be remedied by a rigid execution of laws.

I spoke of compulsory education in my report last year, therefore, I will only say that I think it would work a great blessing on many of our careless people, and make our schools benefit those who mostly need help, and are frequently indifferent to their own interest. It works well in northern and eastern States, then why not in Tennessee?

It will be seen from my statistical report that the average duration of our schools is a little short of three months. Now, this is on account of our trustee being behind, and the slow process of re-collecting by our prosecuting and executing officers; therefore, I cut our schools about one-third short in order to get out of debt.

I have advised and insisted on the teachers making their terms five months, where the houses can be made comfortable, and charge for the excess of the free school, which many are doing.

I am of the opinion that County Superintendents should settle with trustees monthly, or at their regular times of settling, and receive the money, and thus become the disbursing agents of the school fund.

Do this; require them to give a good and sufficient bond for the money likely to come into their hands; then the money can be kept separate, every district and teacher receive his part in due time, and the cry of "bad management and speculation with the children's money" will cease.

WILLIAMSON COUNTY.

H. B. WALLACE, SUPERINTENDENT, *Franklin.*

I have the honor herewith to transmit my annual report of the schools of this (Williamson) County. It is as nearly correct as I could make it.

The school interest in the county is growing and I believe that the people of the county are beginning to realize the fact that the public schools must be looked to for the education of the masses. To this end there has been a greater demand this year for good and efficient teachers in the public schools of the county than ever before.

The county school tax has been raised from ten cents to fifteen cents on the one hundred dollars, and at the coming January term of the County Court it will be raised to twenty cents.

To compel teachers to be examined and directors to perform their duties more promptly, the old provision, that all warrants should be approved by the County Superintendent, ought to be re-enacted.

I have done all in my power to keep the districts out of debt, but in this I have not entirely succeeded. Would that I could entirely succeed in my attempts in this direction.

I have visited the schools of the county, talked to directors, teachers and patrons every opportunity about the necessity of good schools, and have tried in every way to keep the school interest in their minds and alive in the county, and I must say I feel greatly encouraged in my work.

WILSON COUNTY.

J. B. POWELL, SUPERINTENDENT, *Tucker's Cross Roads.*

This has been a great year for public schools in Wilson county. We have had more schools and longer terms than during any previous year.

The Lebanon Normal School has accomplished much and lasting good for the teachers and schools of our county.

We have expended \$22,000 in our free schools this year.

REPORT
OF THE
INSPECTORS, WARDEN, SUPERINTENDENT,
PHYSICIAN AND CHAPLAIN,
OF THE
Tennessee Penitentiary
TO THE
FORTY-FOURTH GENERAL ASSEMBLY
OF THE
STATE OF TENNESSEE,
DECEMBER, 1884.

NASHVILLE:
ALBERT B. TAVEL, PRINTER TO THE STATE.
1885.

REPORT OF THE INSPECTORS.

To the General Assembly of the State of Tennessee :

The Inspectors of the State Penitentiary, according to the requirements of the law, would submit the following report of the transactions of the Penitentiary during the preceding two years :

For a full showing of the several matters of which the Inspectors are required to report in particular, embraced in section 6333 of new Code, the Board would respectfully refer to the several Reports of the Superintendent, Warden, Assistant Warden, and Physician, all of which are herewith submitted.

The Inspectors, soon after their installment in office, visited the main prison, and ascertained that the officers were competent, vigilant and faithful, and that the convicts were perfectly governed. They, on their first visit, suggested that small apertures, with iron bars across, be made in the lower part of the door-shutters to the cells, for the purpose of better ventilation. This improvement was very promptly made by the Lessees without cost to the State.

Early in May, 1883, the Board of Inspectors, under the act of the General Assembly passed March 29th, 1883, authorizing the erection of a cell-building for female convicts and laundry within the enclosure of said prison, and for certain improvements for ventilating the cells occupied by male convicts, and appropriating \$3,500.00 for the purposes, advertised for sealed bids for the erection of the cell-building and the laundry. The contract therefor was awarded to I. N. DeHart, as the lowest and best bidder, for \$2,874.00. The contract for iron-casing the cells and cementing floors was awarded at \$239.78. The contract for ventilating cell-building No. 1 was awarded at \$249.34—total \$3,363.12. Seeing the beneficial results of the improved ventilation of cell-building No. 1, the Board, under the authority given them by law to have

all needed repairs made, determined to have ventilators also put in cell-buildings Nos. 2 and 3, which was done at a cost of \$674.31. These improvements in ventilation were all designed by, and made under the supervision of, the skillful architect, W. H. Cusack, who very generously gave his services without any charge. The character of these improvements in ventilation, and the great beneficial results thereof, in the improved sanitary condition of the prison, are fully explained in accompanying Report of Prison Physician, D. J. Roberts. There were some other items of expense incurred by the Inspectors in visit of Physician and themselves to branch prisons, and in paying auctioneer for crying the lease of the convict labor, amounting to \$100.93.

Under section 29 of the act of the Legislature, passed March 28, 1883, to provide for the lease and management of the State Penitentiary, an insurance for \$50,000 was taken on the building at the State prison on the 25th of July, 1883, for two years, in solvent companies, at a cost of \$2,729.35, which was paid by the Lessees of the prison, as provided by said act. On the — day of —, a fire occurred at said prison, which is fully explained by the Warden in his accompanying report. The loss was only partial, and the buildings were rebuilt, and the losses repaired, by the insurance companies, at a cost to them of \$3,248.50, and without any expense to the State. As this lessened the amount of the insurance to the extent of the loss, the Inspectors, on the 15th of May, 1884, took an additional insurance for two years at an expense of \$238.84. Immediately after the fire the necessity for a more abundant supply of water at the prison was brought to the attention of the Board, and it resolved to have the pool greatly enlarged, which was done at a cost of \$605.00, by Cherry, Morrow & Co., for which they have not been paid, but wait for an appropriation by the Legislature. The advantages of this enlargement of the pool are fully set forth in accompanying report of the Warden.

It will be seen from the preceding part of this report that the entire expense incurred for building, repairs, etc., for the two years is the sum of \$4,982.20, showing a deficiency in appropriation of \$1,482.20, to be provided for by a deficiency appropriation. The Board would here suggest the necessity of some liberal appropriation to be made, to be expended by the Inspectors in such improvements and repairs as to them may seem to be needed for

the humane treatment of the convicts, and for their moral improvement.

The Board would call the attention of the Legislature to the Act of 1871, chap. 94, sec. 7, which provides for certain compensation to the Inspectors. Yet no appropriation having been made by the last Legislature, the Inspectors for the last two years have received nothing.

The Board of Inspectors have held frequent meetings, of which full and correct minutes have been kept and recorded by Mr. J. W. Allen, who has acted as Secretary of the Board; and they have often visited the main prison, and once two of the members of the Board visited all of the branch prisons, and have endeavored to see that the laws, rules and regulations of the prison have been strictly observed, that the officers have faithfully performed their respective duties, and that the convicts have been properly governed.

Respectfully submitted,

ATHA THOMAS, *Chairman.*

P. P. PICKARD.

REPORT OF THE WARDEN.

To His Excellency Gov. W. B. BATE, and the Hon. ATHA THOMAS, President, and Hons. D. A. NUNN and P. P. PICKARD, Inspectors of Tennessee Penitentiary.

GENTLEMEN :—Permit me to present to you my biennial report from December 1, 1882, to December 1, 1884, inclusive. I was appointed Warden by Gov. Bate, Jan. 20, 1883. You will observe, a portion of this report precedes that date. It has been the custom to submit reports bearing date December 1, in order to be submitted to the General Assembly, which convenes the following January.

You will observe a reduction of inmates in the main prison, which fact is owing to a law passed and approved by the Governor March 23, 1883, prohibiting over 550 men being kept in the main prison at one time. Since the date for that law to go into effect, we have never exceeded that number. The excess has been sent to the branch prisons, as seen by tabulated statement accompanying this report.

FIRE.

On Saturday night, Jan. 12, 1884, the east end of the blacksmith shop was discovered to be on fire, which threatened to prove very destructive. The second story was used as a paint-shop, and was thoroughly saturated with oil. The most alarming feature connected with it, however, was the scarcity of water. Having to depend on a six-inch main, with only a surplus in a pool in the yard containing when full, only sixteen thousand gallons, the situation was becoming very serious, but by the efficiency of the fire department and the assistance of trusty convicts, the fire was soon under control. The loss to the State was about \$3,300, which was fully covered by insurance. Within ten days, everything was in good running order, without the loss of a dollar or a prisoner.

I feel that this report would be incomplete without being permitted to return my thanks to the fire department, the Hermitage Guards, who tendered their services, the policemen who were on duty here, and to the citizens who so nobly respond when called on.

DISCREPANCIES.

You will observe a discrepancy between the report of 1880-82, and this, of ten men, charged to the Spence farm (now Dr. Morrow's.) We have pursued the inquiry very closely all along the line, by actual count and checking from the books, but have failed to find it. I am satisfied it is only a clerical error.

DISCIPLINE.

During the past two years good order, in the main, has prevailed. Nothing looking towards a mutiny of sufficient magnitude has been discovered that I deem necessary to mention, except one case, that of Cæsar White (colored), who resisted prison discipline in such a manner as to excite our gravest fears. He refused to obey any orders, and with formidable bludgeon defied every attempt at arrest. It was at an hour of the day when the prisoners would soon be turned out in the yard, which made it necessary that he should be arrested before that time. With much profanity he declared he would not be taken, and would kill any one who attempted it. Being fortified in such a position that he could not be approached, we were forced to shoot him. He died a few days afterward in the prison hospital. He was of herculean strength and a most desperate character. An inquest was held, and the killing was pronounced justifiable.

I recognize the great necessity of discipline, and have endeavored to enforce it, but I recognize another fact, equally patent, that discipline is not cruelty. Acting upon this theory, I have looked first to the safety of the prisoners and a strict compliance with the laws of the State, after which, my every effort has been to benefit the prisoners. I do not believe in the unnecessary humiliation of a prisoner. My experience is that its results are directly the reverse of the intention of the courts, when he was imprisoned. It strengthens his evil nature, and turns him out on society a more hardened criminal than when sent here.

My convictions are that prisoners should be treated with as much humanity as possible. Punishment of some nature is absolutely necessary, and some may be punished who are measurably less guilty than others, who are not, but the balance is always in favor of the prisoner. While I have no regard for the maudlin sentimentalist, I despise cruelty in any form, even when covered by the thin subterfuge of enforcing discipline, but there is a level upon which an officer can stand, where he can be just to the unfortunates under his control, and be faithful to the trust confided to him by the State.

Long term men generally make good prisoners. They know their record enters largely into the mind of the Executive when they apply for pardon. They generally are among the more intelligent class of prisoners.

We have but few rules, but generally take into consideration the nature of the case and let our best judgment govern us. As a body, our prisoners have been obedient and cheerful, but it is impossible to prevent petty infractions of discipline. Partially on account of bad ventilation, and partially as a reward for good conduct, I have permitted them to remain an hour or two in general conversation before being bolted. Upon the recommendation of Dr. Roberts, I have separated those suffering from lung and other troubles, which might become dangerous to others occupying the same cell with them. I have also, as far as possible, separated the less hardened criminals from the more vicious. I regret our yard is not large enough to permit an hour's recreation, when time will permit, in the open air. No prisoner need ever violate an order. Printed regulations are read to him on entering the prison, they hang in every shop and ward, and are sufficiently liberal to be within easy reach of all.

PUNISHMENTS.

The experience of all students of prison life prove that there must be some mode of punishment that must be inflicted without manifestation of passion, and the least amount that will bring the incorrigible to terms. The inmates are made up largely of the ignorant and turbulent elements of society. A portion of these are law-breakers by profession, mostly from want of proper training in early youth and a means of reclaiming them, aside from prison

life. It is the certainty of punishment which brings the incorrigible to obedience.

LIFE PRISONERS.

I desire to call your attention to a class of prisoners whose pitiable condition inspires my most intense commiseration; however great their shortcomings may have been. We have now confined here 46 men and one woman, whose term of service is for their natural lives. As a general rule, they make the best prisoners. Coming in contact every day with those who are soon to go out into the world again, and no hope for them except in Executive clemency; days, weeks, years and decades come and go, and bring no bright gleam of hope to them. Some of them give evidence of a thorough reformation of character, and live to regret the (perhaps) one rash act of their lives. The constant mental strain is very trying. I hope the wisdom of our law-makers may devise some means of relief for them.

INSANE AND INCURABLE.

I am of opinion that you should ask the Legislature to make some provision for this unfortunate class. Some become insane here; others are sent here (strange as it may seem) that way. The number has been increasing since the law was repealed permitting them to be sent to the asylum. There is a general concurrence of opinion that the State, when depriving them of liberty, does not desire to shorten their days, nor does the State desire to subject the individual serving such sentence to any danger of disease and death, only such as is incident upon the wear and tear of life.

Of the incurable, we have one man with an aggregate sentence of 28 years, of sentences from one to five years each. He has been an inmate of the hospital since soon after his reception. We have a number of others equally incurable.

CONDITIONAL PARDONS.

I desire to call your attention to the principles of conditional pardons. Let the Governor be permitted to issue pardons to meritorious cases, the contingent to be continued good conduct. If he should fail to comply with the contract, let him be arrested wherever found and returned to serve out his full term. It will be a bond for his future good conduct, and protect society from him.

INNOVATIONS.

Believing solitary confinement, starving on bread and water, tying up by the thumbs, etc., to be unnatural, inhuman, cruel, and a relic of barbarism, they have been abandoned. When in solitary confinement his mind has time to brood upon his troubles, which is said to aggravate insanity. Starvation and tying by the thumbs fail to produce the desired effect. Acting upon the suggestion of Dr. Roberts, close shaving has not been required. Men are permitted to wear their hair and beard neatly trimmed, believing it prevents neuralgia, pulmonary and other diseases.

GOOD TIME.

One of the wisest provisions for the government of prisoners is the good time Act, which permits to be deducted from his sentence (for good conduct), one month for the first year, two months for the second, three months for each year from the third to the tenth inclusive, and four months from each year after that to the end of his term. Following the same theory, that long term men require some advantages, as they become old and broken down, I would suggest that the law be so amended as to provide that, from the seventh to the eleventh year inclusive, four months on each year be allowed, and six months after that, to the end of the term. I feel confident that this would still further enhance the benefits of the good time Act. It may be of interest to state that Tennessee is the pioneer in enacting the good time law, and now allows less good time than a large majority of the States. As far back as 1836 the first law was enacted and amended in 1870. A committee of prison officials from another State visited this prison in 1840, to observe its operations. They carried away with them a copy of the bill, and secured its adoption in their State.

In 1844 Warden McIntosh was invited to go before the New York Legislature and give his ideas upon its beneficial effects. I would suggest that good time laws be made retrospective.

WORKING HOURS.

The State guarantees ten hours per day for work. The inspectors and prison officials are empowered to regulate the time for the greatest convenience. The following schedule has been adopted :

From March 16 to October 15, ten and a half hours; from October 16 to November 15, ten hours; from November 16 to February 15, nine hours; from February 16 to March 15, ten hours. Sundays, Christmas, meal hours, and time for washing, taken from the above, makes the time guaranteed by the State.

SMALL POX.

Notwithstanding our every effort, by strict quarantine and otherwise, smallpox broke out in our prison in the spring of 1883. A full history will be found in the report of Dr. Roberts.

NEW BUILDINGS.

By an Act passed and approved by the Governor March 23, 1883, the Inspectors were authorized to build a ward for female prisoners, and a wash-house. The building contains an open corridor and eighteen large cells and a comfortable wash-house. The system of ventilation adopted has been of great benefit, which will be elaborated by Dr. Roberts.

MORAL CONDITION.

Everything in my power has been done, consistent with safety and discipline; to relieve the unnecessary miseries of confinement. John Howard and Elizabeth Fry inaugurated a crusade against the unnecessary rigors of prison life over a century ago. The reform started by them has continued and been adopted by different nations. During the last forty years, by the students of social and prison science much crime has been prevented. Believing, as I do, that the vengeance of the law has been satisfied when a prisoner (for crime) has been deprived of his liberty, and forced to work without remuneration, I have done all in my power to cultivate a better state of feeling between the discharged felon and the outside world, that society may be benefited. I believe society should be more solicitous about discharged prisoners. The surest way to elevate a man is to elevate him in his own estimation. The word penitentiary means a place of penance, and I am satisfied that it is not the desire of the Commonwealth of Tennessee to destroy her wayward children, but to reclaim them, and prevent a recurrence. Gov. Bate has pardoned a large number of youths upon promises of parents and friends to reclaim them.

Under the direction of yourselves and Gov. Bate, I have strictly enforced the law, returning them home, well clothed and free of expense.

Old documents are sometimes interesting, to show the change that comes over us as we keep step to the march of progress. The following is the preamble to a resolution adopted in one of our sister States in 1814: "That a prison house shall be built and so constructed that its very aspect shall be terrific, and appear, what in fact it shall be, a dark and comfortless abode of guilt and wretchedness. No punishment shall be too great. The prisoner shall be confined in a solitary cell, and cut off from all hope of relief or communication with any one. He shall be provided with a hammock in which to sleep, a block on which to sit, and such coarse food as may be best suited for a person in a situation designed for grief and penance. He shall be furnished with only so much light from the firmament as will enable him to read the New Testament (whose laws he has violated), which shall be his sole companion in misery."

LOST RECORDS.

Upon taking charge of the prison great difficulty was experienced in finding lost records, caused by the want of a suitable place to keep them. Some were found in the second and third stories in boxes; some were so mutilated as to be almost worthless, and some were lost. It would be well to provide a secure place for keeping them, and duplicating lost transcripts.

SEPARATE ACCOUNTS.

We present you with a separate account of branch prisons, which has never heretofore been done. [See tabulated statement accompanying this report.]

THE DEAD.

Believing it to be my duty to give deceased prisoners a decent burial, I have had every one buried in citizen's clothes, in a neat coffin, and have demanded receipts from the sexton at Mt. Ararat, which has insured the certainty of their burial.

COLORIED PRISONERS.

You will discover a very great preponderance of colored prisoners, and a very small excess of whites, over the figures before the

war. You will find from county statistics, herewith furnished, that counties having the largest colored population have the largest numbers here. Tipton county, with a population of 14,884, largely colored, has 25 here, while Sumner county, with a population of 23,711, mostly white, has only 10; Haywood county, with a population of 25,094, largely colored, has 33 here, while Wilson county, with a population of 25,881, mostly white, has only 12. There are 918 colored prisoners here, out of a total of 1,323; there are 913 who have no education whatever, a large per cent. of whom are colored. Of the 1,323 here, you will discover there are 1,136 who have no trade or occupation.

LIBRARY.

I found but few books here, and no legislation in favor of a library, and have had to depend entirely on voluntary contributions. Notably among those who have contributed largest is the Rev. Dr. W. D. A. Mathews, of the W. S. F. A., of Onarga, Ill., who has sent us quite a lot of school and other valuable books. The Eunice Jackson Benevolent Society, and other charitably disposed ladies of Nashville, have furnished us quite a large amount of Sunday reading matter.

SUNDAY-SCHOOL.

Much good has been done by the prison Sunday-school—an average attendance of 450, during the past two years, except when quarantined against smallpox. The prisoners elect their own Sunday-school officers, some from citizens and some from prisoners. I consider it a great auxiliary for future good.

FEMALE PRISONERS.

The female prisoners are kept in a yard outside of and adjoining the main prison. Their health has been much improved since moving into their new quarters. A portion are kept at work in a shop to themselves, on light and easy work; the remainder do the laundry work for the prison. I find their *morale* much improved since they have been kept constantly employed.

ORIGIN OF THE PENITENTIARY.

I find from old reports, kindly furnished me by Mrs. Hatton, State Librarian, that the original act for building the Penitentiary became a law October 28, 1829, signed Ephraim H. Foster, Speaker

of the House; Joel E. Watkins, Speaker of the Senate; Samuel Houston, Governor. Additional acts were passed November 5, 1829, and December 9, 1829, with the same officers, except they were signed by Gov. Cannon.

The first prisoner convicted to the Penitentiary was named W. G. Cook, from Madison county, January, 1830. It is related that he was a tailor, and was convicted of malicious stabbing and assault and battery. He stabbed a man with his shears, and assaulted him with his goose. He was made to cut and make his own suit, the first work ever done in the Penitentiary.

MISCELLANEOUS.

Of a total of 2,507 prisoners on our books for the past two years, we have received and recaptured 1,181; we have discharged in various ways 1,184, showing a decrease of three within the period mentioned—the first time in the history of the institution (over half a century) that it has occurred. There are 236 prisoners here, supposed to be under 21 years of age; nearly all of them are between 21 and 16 years, largely preponderating toward 21 years. It is impossible to ascertain their exact ages. We are forced to rely upon their own statements, unless their physical appearance contradicts it. An impression prevails amongst them that the younger they are the better chance they have for Executive clemency; hence we see prison reports teeming with boys.

Eli Biddings (col.), from Maury county, sentenced for life June 3, 1867, is the oldest prisoner, having served 17 years and 6 months.

Sam Armstrong (col.), from Davidson county, has the longest sentence, aside from life, having been convicted in September, 1878, for 46 years.

There are about 10 acres of ground here belonging to the State, about 7 of which are enclosed by the prison wall, and occupied by the main prison, shops, etc.; the remainder is used as a yard for female prisoners, stables, lumber-yard, and Warden's residence. For a detailed statement of shops, prison-yard, clothing, bedding, etc., I refer you to Dr. Roberts' report.

The entire force is engaged in the manufacture of wagons, except about 20 men in the foundry, and about 25 in the furniture shop.

The pool, which you saw proper to enlarge, has been of great service to us. It now has a capacity of 65,000 gallons, which is an

abundant supply for all purposes. The capacity of the old one was only 16,000 gallons. The plugs, four in number, are so situated and arranged that a steam pressure of 150 pounds to the square inch can be brought to bear as quickly as from a fire engine, and a stream of water thrown anywhere in the yard, or over the top of a three-story building. We can now overcome any ordinary fire without the assistance of the fire department.

I cannot close without tendering to you, gentlemen, and to Gov. Bate, my kindest consideration for the many courtesies you have shown me in the various business relations that have arisen between us.

To the lessees I return my thanks for the promptness with which they have responded to every demand upon them; and to the prison officials and attaches I feel grateful for the assistance they have given me during the past two years.

Respectfully,

F. S. HARRIS,

Warden.

CONVICT RECORD.

2—Prison.

CONVICTS IN THE MAIN PRISON, NOV. 30, 1884.

COUNTY.	NAME.	COLOR.	CRIME.	COM. OF SENTENCE.	YEARS.
Sullivan.....	Almany, T.....	white	Murder	July 15, '81	Life.
Rutherford....	Allen, Thomas.....	white	Fraud't br. of trust.	April 11, '80	15
Davidson.....	Ambrose, James.....	white	Fraudulent breach of trust and larceny.	Oct. 24, '80	3 sentences. 7
Hamilton.....	Anderson, Levi.....	white	Grand Larceny.	Oct. 14, '81	9
Lawrence	Atwell, R.....	white	Bigamy.	Dec. 28, '82	5
Robertson	Allen, N. O.....	white	Larceny.	Feb. 12, '83	3
Madison	Alexander, Alex.....	white	Grand Larceny.	Feb. 12, '83	4
Green.....	Allen, James.....	white	Horsestealing.	Feb. 15, '83	9
Morgan.....	Avery, Wm.....	colored	Murder.	April 19, '76	Life.
Giles.....	Atkins, Henry	colored	Murder.	May 25, '77	20
Madison.	Armstrong, Albert.....	colored	Grand Larceny.	May 16, '79	9
Jefferson.....	Allen, David	white	Murder.	April 17, '78	Life.
Rutherford ...	Allen, James.....	colored	Malicious stabbing.	August 15, '82	4
Shelby... ..	Anderson, Lindsey.....	colored	Petit Larceny.	March 11, '83	3
Williamson ...	Allison, Nelson.....	colored	Rape.	March 30, '81	13½
Obion.....	Allison, Alex.....	colored	Murder.	Dec. 10, '80	20
Madison.....	Andrews, Will.....	colored	Bigamy.	June 23, '83	3
Macon.....	Adams, Wills	colored	As. Bat. to com. Rape.	Sept. 1, '83	2 sen., 2 and 1.
Bradley	Adams, Fillmore.....	white	Murder.	Jan. 15, '84	Life.
Shelby.....	Austin, Walker.....	colored	Assault to Rape.	June 20, '83	12
Houston	Allen, James.....	white	Housebreaking.	Feb. 5, '84	9

Davidson.....	Alexander, R. B.....	white	Larceny.	April 14, '84	31
Hamilton.....	Anderson, Luke.....	white	Larceny.	Nov. 24, '84	5
Davidson.....	Armstrong, Sam.....	colored	Burglary & Larceny.	Sept. 17, '78	46
DeKalb.....	Bates, W. B.....	white	Murder.	Jan. 20, '80	10
Giles.....	Briggs, Wm.....	white	Murder.	Jan. 24, '80	20
Carter.....	Bowers, A. B.....	white	Murder.	July 16, '80	10
Haywood.....	Bailey, Charles.....	white	Housebreaking.	Aug. 13, '81	5
Davidson.....	Brown, Lewis R.....	white	Embezzlement.	Feb. 1, '82	5
Cannon.....	Brown, Obe.....	white	Larceny.	Feb. 20, '82	6½
Hamilton.....	Brown, Rob't.....	white	Larceny.	Dec. 22, '81	5
Hawkins.....	Branson, John.....	white	Horsestealing.	Sept. 28, '77	10
Fayette.....	Bayless, H.....	white	Murder.	Nov. 4, '82	10
Davidson ..	Brown, Wm, al. Palmer...	white	Larceny.	Nov. 23, '80	10
Davidson...	Bingham, George.....	colored	Burglary & Larceny.	Dec. 20, '72	21
Shelby.....	Brooks, Clay.....	colored	Housebreaking.	May 11, '76	15
Maury.....	Biddings, Eli.....	colored	Murder.	June 3, '67	Life.
Shelby.....	Boone, Milton.....	colored	Murder.	Jan. 15, '80	Life.
Lawrence.....	Bentley, Rob't.....	colored	Murder.	Dec. 23, '78	20
Johnson.....	Bethel, Josh.....	colored	Rape.	Nov. 21, '76	15
Benton.....	Benton, Daniel.....	white	Horsestealing.	May 24, '77	16
Montgomery..	Burney, Patrick.....	colored	Robbery.	March 3, '80	15
Haywood.....	Bond, Platt.....	colored	Murder.	July 16, '79	Life.
Maury.....	Brown, Thomas.....	colored	Burglary.	Feb. 16, '82	8
Hardman.....	Burch, John.....	colored	Assault to Murder.	Dec. 6, '82	5
Lawrence.....	Bailey, John.....	colored	Malicious Shooting.	April 27, '83	5
Montgomery..	Bowman, Henry.....	colored	Assault to Rape.	Feb. 3, '80	10
Fayette.....	Brown, Lee.....	colored	Larceny.	July 9, '82	3
Rutherford....	Brown, Joe.....	colored	Larceny.	Aug. 22, '82	5

2 sent., 4 and 1.

CONVICTS IN THE MAIN PRISON, NOV. 30, 1884.

COUNTY.	NAME.	COLOR.	CRIME.	COM. OF SENTENCE.	REMARKS.
Hardeman.....	Biggers, John.....	colored	Assault to Rape.	July 23, '81	20
Madison.....	Brooks, Claude.....	colored	Larceny.	Nov. 23, '82	4½
Greene.....	Brown, Wm., alias Thomas..	colored	Rape.	Oct. 15, '80	Life.
Davidson.....	Burnes, Jno., alias Green.....	white	Larceny.	May 28, '83	3
Putnam	Breeding, Fred.....	white	Horsestealing.	June 21, '83	6
Davidson.....	Brooks, John.....	white	Mulestealing.	Sept. 6, '83	4
Davidson.....	Brown, Dock.....	colored	Assault to Murder.	Nov. 10, '83	3
Rutherford....	Boyett, Marion.....	white	Murder.	Dec. 11, '83	10
Davidson.....	Booker, Green.....	colored	Malicious Stabbing.	Jan. 11, '84	2
Davidson.....	Briley, Charles.....	colored	Horsestealing.	Feb. 20, '84	5
Hancock	Bell, Burdine.....	white	Voluntary Mansl'r.	Jan. 24, '84	2
McNairy	Bolton, Isaac.....	white	Rape.	May 6, '84	15
Shelby	Blocker, Bat.....	colored	Murder in 2d degree.	May 25, '84	20
Weakley	Barbee, Rob.....	white	Murder.	May 25, '84	20
Knox.....	Bryant, Jim.....	white	Larceny.	June 1, '81	5
Davidson.....	Brewer, Morgan.....	colored	Houseb'k'g & Lar'y.	Nov. 28, '84	6
Davidson.....	Bennington, Buck.....	white	Larceny.	Nov. 28, '84	1
Monroe.....	Casey, John.....	white	Robbery.	Nov. 10, '77	10
Wilson.....	Coomer, John W.....	white	Murder.	Feb. 5, '81	20
Claiborne....	Craig, John.....	white	Murder.	Nov. 7, '74	Life.
Shelby.....	Clare, Thomas.....	white	Housebr'ng Larceny.	March 27, '81	5
Greene.....	Cooper, John J.....	white	Arson.	June 19, '78	12

Wilson.....	Campbell, Joe.....	white	Murder.	March 4, '82	10
Madison	Caruthers, E.....	white	Grand Larceny.	Feb. 27, '82	5
Overton	Cook, R.....	white	Murder.	April 15, '82	Life.
Williamson	Crawford, Thos. H.....	white	Rape.	Feb. 26, '76	Life.
Fayette.....	Campbell, D. H.....	white	Horsestealing.	Nov. 4, '82	4
Davidson.....	Caldwell, W. L.....	white	Larceny.	Feb. 1, '83	5
Madison	Conners, C. C.....	white	Grand Larceny.	March 3, '83	5
Campbell.....	Caves, John.....	white	Grand Larceny.	March 26, '83	3
Madison	Clay, Henry.....	colored	Rape.	June 14, '78	Life.
Henry	Clay, Henry.....	colored	Rape.	May 26, '80	17
Shelby.....	Clayton, Wm.....	colored	Larceny.	Dec. 23, '79	11
Davidson.....	Carter, Jack.....	colored	Horsestealing.	Nov. 17, '79	10
Davidson.....	Coops, George.....	colored	Larceny.	Feb. 7, '82	4
Rutherford...	Cheatham, Jeff.....	colored	Assault to Murder.	August 16, '82	5
Davidson	Clopton, Willis.....	colored	Larceny.	Nov. 29, '82	3
Madison	Connly, Wash.....	colored	Housebr'g & Mahem.	Feb. 2, '73	20
Carroll.....	Cunningham, Shed.....	colored	Arson.	May 23, '79	10
Knox.....	Carter, Newman.....	colored	Murder.	Feb. 12, '79	Life.
Maury	Carter, Leonard.....	colored	Murder.	April 3, '78	20
Wilson	Crowley, Frank.....	colored	Rape.	Oct. 13, '80	10
Fayette.....	Crawford, Rich.....	colored	Murder.	March 13, '79	10
Shelby.....	Clark, Jo.....	colored	Larceny.	Dec. 6, '82	3
Shelby.....	Castin, Garret.....	colored	Larceny.	March 11, '83	4
Jackson.....	Coffee, James.....	white	Lar. & enter'g a house	Sept. 25, '82	7
Davidson.....	Clark, M. C.....	white	Robbery.	Sept. 7, '83	14
Rutherford...	Carney, Jack.....	colored	Larceny.	Dec. 27, '83	3
Pickett.....	Cornatzer, Cook.....	white	Murder.	Feb. 8, '84	15
Trousdale.....	Cartwright, Joseph.....	white	Murder.	March 5, '84	15

3 sen., 7-3-1.
2 sen., 7 and 3.

2 sen., 5 and 2.

CONVICTS IN THE MAIN PRISON, NOV. 30, 1884.

(22)

COUNTY.	NAME.	COLOR.	CRIME.	COM. OF SENTENCE.	YEARS.
Crockett.....	Cave, Jno., alias H. Lewis...	white	Horsestealing.	June 6, '84	4
Gibson.....	Caraway, James.....	white	Murder.	June 23, '84	10
Shelby.....	Curtin, John.....	white	Grand Larceny.	June 30, '84	3
Benton ..	Chester, Albert.....	colored	Murder.	Aug. 20, '84	10
Davidson.....	Carter, Jeff	white	Burglarious Felony.	Sept. 25, '84	5
Davidson.....	Curry, Charles.....	colored	Larceny.	Nov. 7, '84	2
White	Curran, Will.....	colored	Larceny.	Oct. 25, '84	2½
Madison.....	Cason, French.....	colored	Obstruct'g Railroads.	Oct. 30, '84	5
Rutherford...	Darnell, John.....	white	Robbery.	May 25, '81	8
Blount.....	Dillon, John.....	white	False Pretense.	Dec. 16, '82	6
Tipton.....	Donaldson, Spencer.....	white	Murder.	Dec. 26, '77	Life.
Shelby.....	Davis, William.....	colored	Rape.	Sept. 17, '82	10
Bedford.....	Dowling, John J.....	white	Grand Larceny.	Jan. 19, '83	3
Davidson.....	Dozier, Hugh.....	colored	Assault to Kill.	March 12, '83	3
Cheatham.....	DeMoss, Wash.....	colored	Assault to Murder.	Dec. 1, '83	2
Obion	Dorch, Dave... ..	white	Horsestealing.	Feb. 19, '84	5
Macon	Davis, A. J.....	white	Horsestealing.	April 2, '84	10
Hickman.....	Dias, James F.....	white	Assault to Rob.	April 26, '84	3
Knox.....	DeFoe, Marion.....	white	As. & Bat. to Rape.	Aug. 31, '84	2
	Ekel, Y. W.....	white	Murder.	May 7, '80	7

ysrs., 9 m, 28 ds.

two cases.

Lincoln.....	Ervin, Frank.....	colored	Burglary.	July	19, '80	7
Davidson.....	Ewing, Wm. H.....	colored	Frd'nt br. of Tr.	May	25, '81	7
Madison.....	Early, Mitch.....	colored	Grand Larceny.	June	30, '81	12
Shelby.....	Enaley, Howard.....	colored	Housebreaking.	March	3, '75	2 sen. of 6 yrs. 10 full time.
Campbell.....	Easley, Wm.....	colored	Murder.	Jan.	30, '84	Life.
Bedford.....	Elkin, Charles.....	colored	Murder.	March	5, '84	20
Davidson.....	Eatleman, Wm.....	colored	Larceny.	Nov.	29, '84	5
Claborn.....	Fuston, James.....	white	Rape.	Nov.	19, '80	10
Davidson.....	Foster, H. C.....	white	Murder.	Feb.	1, '81	20
Shelby.....	Fipps, William.....	colored	Larceny.	Oct.	3, '82	3
Maury.....	Frierson, Calvin.....	colored	Larceny.	Oct.	21, '82	6
Rutherford....	Fletcher, John.....	colored	Larceny.	March	5, '83	2 sen. of 3 yrs. 6
Williamson ...	Fleming, Gus.....	colored	Lar. and Housebr'g.	Feb.	11, '78	19
Sumner.....	Franklin, Ch.....	colored	Rape.	Feb.	18, '82	10
Davidson.....	Furby, Ch.....	colored	Murder.	Jan.	23, '75	15
Stewart.....	Foley, John.....	white	Larceny.	Aug.	15, '82	4
Robertson	Ferguson, Thomas.....	colored	Larceny.	Feb.	12, '83	3
Smith.....	Fisher, Reuben.....	white	Murder.	Dec.	21, '82	10
Davidson.....	Fort, alias Graves, Rob.....	colored	Lar. and Housebr'g.	June	21, '83	33
Blount.....	Flannigan, Rob.....	white	Murder.	Jan.	25, '83	10
Davidson.....	Fuller, alias Gaines, A. F....	white	Larceny.	May	17, '84	5
Dyer.....	Fitzhugh, John S.....	white	Murder.	June	23, '84	10
Scott.....	Foster, Hiram.....	white	Felonious Assault.	Jan.	12, '84	2
Shelby.....	Gorman, Sam.....	white	Larceny.	Dec.	21, '82	2 mos., 17 ds. 3
Shelby.....	Gray, E. L.....	white	Perjury.	Dec.	20, '82	3
Davidson.....	Grover, E.....	white	Lar. from Person.	Jan.	24, '83	3
Lauderdale ...	Garrison, Monroe.....	colored	Murder in 2d degree.	Oct.	17, '81	20
Giles.....	Gordon, James.....	colored	Larceny.	Dec.	6, '82	3

CONVICTS IN THE MAIN PRISON NOV. 30, 1884.

(24)

COUNTY.	NAME	COLOR.	CRIME.	* COM. OF SENTENCE.	YEARS	
Davidson.....	Gilliam, Joe.....	colored	Murder.	Sept. 27, '82	10	
Hamilton....	Good, William.....	colored	Robbery.	Nov. 26, '78	15	
Davidson.....	Greer, Turner	colored	Murder.	Dec. —, '74	Life.	
Hardeman....	Green, Henry.....	colored	Housbrk'g & Lar.	August 3, '80	6	2 cases 3 y. each.
Campbell.....	Grant, Walter.....	white	Felonious Assault.	March 26, '83	3	
Madison.....	Gardner, Andrew.....	colored	Forgery.	June 22, '83	6	2 cases 3 y. each.
Weakley.....	Gardner, Andy.....	colored	Larceny.	June 28, '83	2	
Hamilton	Griffin, John.....	colored	Rape.	Oct. 13, '79	15	
Henry	George, John.....	colored	Larceny.	Feb. 18, '84	3	
Davidson.....	Gordon, Dave.....	colored	Murder.	March 4, '84	17	
Carter.....	Gong, James.....	white	Larceny.	Oct. 16, '83	3	
Maury	Gentry, Samuel.....	colored	Murder.	June 14, '84	20	
Shelby	Garvin, Ed.....	white	Gaming.	June 23, '84	1	
Davidson.....	Humphries, Riley.....	white	Larceny.	Oct. 14, '84	1½	
Meigs.....	Harwood, John.....	white	Voluntary Mansl'r.	Nov. 7, —	7	
Davidson.....	Huff, John.....	white	Larceny.	— —	1	
DeKalb	Hayes, Horace.....	colored	A3. to com. Mansl'r.	Nov. 22, '82	—	
Davidson.....	Hannon, Robt.....	white	Larceny.	Oct. 6, '84	2	
Davidson.....	Herbert, Jackson.....	colored	Larceny of a Horse.	Nov. 6, —	5	
Shelby	Harris, Sam.....	colored	Larceny.	June 6, '79	24	8 sentences.
Fayette.....	Houston, Calvin.....	colored	Grand Larceny.	July 5, '78	14	2 sentences.
Rutherford....	Hugley, Booker	colored	Mulestealing.	April 15, '81	5	

Hardin.....	Harrison, George.....	colored	Assault to Rape.	Oct.	6, '81	10
Tipton.....	Harris, Green.....	colored	Mar'g anor's wife.	Sept.	17, '82	3
Davidson.....	Huggins, Andrew.....	colored	Murder.	Feb.	1, '83	Life.
Davidson.....	Hill, Joe.....	colored	Rape.	March	5, '81	18
McNairy.....	Hargraves, Wm.....	colored	Murder.	Nov.	19, '79	Life.
Wilson.....	Harrison, Joe.....	colored	Larceny and Arson.	June	16, '81	6 2 sentences.
Madison.....	Haynes, Samuel.....	colored	Larceny.	Nov.	3, '81	4
Hardeman.....	Harris, James.....	colored	Housebr'g Lar.	Dec.	10, '81	5
Dyer.....	Howard, Rob.....	colored	Grand Larceny.	May	3, '82	4
Hardeman.....	House, John.....	colored	Larceny.	Dec.	6, '82	5
Davidson.....	Howard, Oliver.....	colored	Larceny.	Feb.	19, '83	3
Davidson.....	Harrison, Horace.....	colored	Larceny.	Jan.	25, '83	3
Davidson.....	Herrin, Alex. W.....	colored	Assault to Kill.	Feb.	18, '82	12
Lawrence.....	Hendricks, Albert.....	white	Housebreaking.	Aug.	31, '78	10
Davidson.....	Houchins, John.....	white	Burglary & Larceny.	May	28, '77	16 1/2
Maury... ..	Holcomb, John.....	white	Murder.	March	4, '82	20
Henderson ..	Harris, W. M... ..	white	Housebreaking.	Nov.	23, '81	5
Roane.....	Hamilton, Jack.....	white	Murder.	April	24, '79	20
Davidson.....	Hicks, Berry.....	white	Larceny.	Jan.	3, '83	4
Haywood ..	Hamilton, Walter.....	white	Larceny.	March	21, '83	3
Houston ..	Holley, Wm.....	white	Bigamy.	April	14, '83	2
Untcoi ..	Heigner, John.....	white	Horsestealing.	Nov.	9, '82	3
Maury ..	Hodge, Tom.....	colored	Larceny.	June	12, '83	4
Maury ..	Hickman, Jack.....	white	Horsestealing.	June	12, '83	3 1/2
Maury ..	Hackney, Tom.....	colored	Burglary.	June	12, '83	6
Gibson.....	Hennings, Albert.....	colored	Rev'g Stol'n Goods.	Aug.	3, '83	2
Smith ..	Hunt, Bug.....	white	Perjury.	March	26, '83	3
Tipton... ..	Hall, J. A.....	white	Rape.	Jan.	26, '84	12

CONVICTS IN THE MAIN PRISON, NOV. 30, 1884.

COUNTY.	NAME.	COLOR.	CRIME.	DATE OF SENTENCE.	YEARS.
Montgomery..	Hunter, Wm.....	colored	Housebreaking.	Feb. 27, '84	3
Davidson.....	Hull, Abraham.....	colored	Petit Larceny.	March 14, '84	1
Franklin	Hawkins, James.....	white	Murder.	April 7, '84	Life.
Monroe.....	Hawkins, John.....	white	Malicious Stabbing.	May 14, '84	2
Lauderdale ..	Hudson, Burt.....	colored	Murder in 2d degree.	June 13, '84	7
Benton.....	Hargrove, Wm.....	white	Murder in 1st degree.	June 23, '84	2 sentences.
Stewart.....	Hunter, Elbert....	white	Assault to Murder.	Aug. 20, '84	Life.
Wilson.....	Hodge, Sam.....	colored	Assault to Rape.	Sept. 26, '84	2
Shelby.....	Hill, Alex.....	colored	Murder.	June 6, '83	5
Davidson.....	Irvin, John.....	colored	Larceny.	July 11, '83	Life.
Davidson.....	Ingles, Ed.....	colored	Perjury.	Nov. 12, '84	5
Hawkins	Johnson, George.....	white	Murder in 2d degree.	Jan. 26, '77	3
Haywood.....	Jones, Henry.....	white	Horse & Mulesteal'g.	March 6, '77	20
Shelby... ..	Johnson, E. H.....	white	Robbery.	June 24, '75	16
Crockett.....	Jackson, James C.....	white	Larceny from person.	June 10, '82	3
Putnam	Jackson, W	white	Bigamy.	March 12, '83	2
Williamson ...	Johnson, John.....	white	Horsestealing.	Nov. 29, '81	5
Davidson.....	Jones, Alfred.....	colored	Forgery.	Feb. 4, '82	9
Madison... ..	Johnson, Major.	colored	Grand Larceny.	Feb. 27, '82	7
Humphreys...	Jordan, Jerry.....	colored	Rape.	Aug. 2, '82	Life.
Shelby... ..	Johnson, Henry	colored	Robbery.	June 24, '75	20
Shelby... ..	Jefferson, John.....	colored	Murder.	Jan. 14, '76	Life.

Henry.....	Jenkins, Joe.....	colored	Murder.	May	29, '79	15
Tipton	Johnson, James.....	colored	Larceny.	Jan.	22, '81	5
Giles.....	Jordan, Wm.....	colored	Murder.	May	17, '78	13
Davidson.....	Jordan, John.....	colored	Grand Larceny.	June	10, '82	6
Rutherford ..	Jennings, John.....	colored	Horsestealing.	Dec.	13, '82	6
Carroll.....	Johnson, John A.....	white	Murder.	May	13, '83	10
Davidson.....	Jones, John.....	white	Mulestealing.	June	2, '83	4
Fayette.. ..	Johnson, Charles.....	colored	Grand Larceny.	July	8, '83	3
Davidson.....	Johnson, Green.....	colored	Malicious Stabbing.	July	11, '83	3
Rutherford ..	Jones, Henry.....	white	Larceny.	Dec.	27, '83	3
Shelby	Jones, George.....	colored	Assault to Murder.	Jan.	29, '84	18
Davidson.....	Jones, Caleb.....	colored	Larceny.	March	5, '84	5
Jackson.....	Johnson, Bob.....	white	Counterfeiting.	March	5, '84	3
Carter.....	Justice, Wm.....	white	Larceny.	March	18, '84	3
Shelby	Jeffreys, George.....	white	Grand Larceny.	May	25, '84	5
Wilson.....	Jennings, Frank.....	colored	Murder.	June	6, '84	10
Hamilton.. ..	Johnson, Isaac.....	colored	Murder.	June	21, '84	10
Davidson.....	Jones, N. D.....	white	Larceny.	Nov.	21, —	3
Davidson.....	Johnson, Bob.....	colored	Larceny.	—	29, —	1
Madison.....	Knight, Wm.....	white	Murder.	June	16, '79	Life.
Dickson.....	Kendrigan, Thos.....	white	Larceny.	March	21, '82	4
Hawkins	King, Houston.....	white	Murder in 2d degree.	Oct.	13, '77	15
Shelby... ..	Kusman, Herman.....	white	Grand Larceny.	Dec.	23, '82	3
Haywood.. ..	King, Frank.....	colored	Murder.	July	10, '80	Life.
Dickson.....	King, Martin.....	colored	Larceny.	Nov.	19, '80	7
Washington..	Kelly, Rob.....	colored	Attempt to Rape.	April	13, '77	10
Shelby	Kenedy, Will.....	colored	Assault to Murder.	July	20, '83	10
Maury	Kannan, Dan.....	colored	Murder.	Oct.	11, '83	20

2 sentences.

CONVICTS IN THE MAIN PRISON, NOV. 30, 1884.

COUNTY.	NAME.	COLOR.	CRIME.	COM. OF SENTENCE.	YEARS.
Rutherford....	Kimbro, William.....	colored	Perjury.	Dec. 27, '83	3
Davidson.....	Kizer, Reuben.....	colored	Murder.	March 5, '84	15
Shelby... ..	Kounz, Frank.....	white	Housebr'g & Lar'ny.	Nov. 10, —	3
Blount.....	Lakey, John.....	white	Murder.	May 6, '79	Life.
Haywood... ..	Lennard, Tom.....	white	Grand Larceny.	July 14, '80	6
Decatur	Liles, Grove.....	white	Murder.	Aug. 20, '79	15
Weakley	Loin, J. A.....	white	Murder.	June 6, '82	10
Bedford.....	Lovelace, Henry.....	white	Fraud. Br. of Trust.	March 12, '83	4
McNairy	Linsey, C. C.....	white	Larceny.	Jan. 12, '83	3
Tipton... ..	Lewis, Abe.....	colored	Murder.	Jan. 23, '79	10
Fayette.....	Larkin, Will.....	colored	Murder.	July 20, '75	15
Shelby... ..	Latimore, Bill.....	colored	Assault and Murder.	March 19, '79	10
Davidson	Long, Frank.....	colored	Larceny.	June 13, '82	7
Maury	Lawrence, Mark.....	colored	Larceny.	June 16, '82	5
Hardeman....	Loyd, Britt.....	colored	Larceny.	August 5, '82	5
Davidson.....	Lewis, Charlie.....	colored	Larceny.	Dec. 1, '82	5
Shelby... ..	Larry, David.....	colored	Murder.	Nov. 8, '75	20
Shelby.....	Lucas, Wm.....	colored	Murder.	May 28, '79	10
Hardeman... ..	Lindsley, John.....	colored	Larceny.	Dec. 6, '82	4
Shelby... ..	Lyon, Joseph.....	colored	Robbery.	March 5, '84	9
Polk.....	Lyle, Wm.....	white	Housebrk'g & Lar.	Feb. 19, '84	3
Rutherford ...	Lytle, Thos.....	colored	Housebrk'g & Lar.	April 18, '84	4

Shelby	Lewis, Frank	colored	Murder.	March 29, '84	16
Shelby	Loeb, Oscar	white	Larceny.	Aug. 20, '84	3
Shelby	Morris, Mat	white	Robbery.	June 24, '75	21
Sullivan	Miles, F. C.	white	Murder.	Dec. 7, '78	10
Monroe.	Millsaps, Jasper	white	Murder.	Nov. 19, '80	Life.
Knox	Mangrum, John	white	Robbery.	Dec. 3, '73	21
Claiborne	Massengale, Joe	white	Murder.	Nov. 12, '74	Life.
Sumner	Miller, J. W.	white	False Pretense.	March 12, '83	4
Marshall	Mathews, John C.	white	Horsestealing.	Feb. 28, '81	5
Davidson	Mullins, James A.	white	Forgery.	Nov. 17, '82	6
Shelby	Morton, Thos. B.	white	Grand Larceny.	Feb. 4, '83	3
Shelby	Miller, Steph.	colored	Burg'y and Larceny.	Feb. 26, '81	18
Davidson	Moore, Bob	colored	Larceny.	Oct. 14, '81	6
Hamilton	Myrick, John	colored	Murder.	April 7, '80	20
Maury	Moore, Albert	colored	Horsestealing.	June 11, '80	8
Shelby	Morris, Benj.	colored	Murder.	Oct. 8, '81	20
Davidson	Murry, Samuel	colored	Rape.	Jan. 13, '82	21
Sumner	Martin, Willie	colored	Rape.	Feb. 18, '82	10
Sumner	Martin, Walter	colored	Rape.	Feb. 18, '82	10
Fayette	McGill, Wash.	white	Murder in 2d degree.	July 9, '82	10
Davidson	Morgan, Geo.	white	Assault to Kill.	June 11, '78	10
Stewart	Mockbee, Robt.	colored	Murder.	March 11, '79	17
Fayette	Morrow, Mack	colored	Murder.	Nov. 17, '79	Life.
Davidson	Moore, Thos.	colored	Housebreaking.	Feb. 5, '81	7
Shelby	Mevo, Peter	colored	Murder in 2d degree.	May 24, '77	20
Montgomery ..	Merriweather, Dave	colored	Obstructing R. R.	Dec. 24, '76	15
Madison	Miller, Daniel	colored	Crime against Nature.	June 6, '82	5
Davidson	Moorman, Simon	colored	Larceny.	Nov. 4, '82	3

CONVICTS IN THE MAIN PRISON, NOV. 30, 1884.

COUNTY.	NAME.	COLOR.	CRIME.	COM. OF SENTENCE.	YEARS.
Rutherford....	Kimbro, William.....	colored	Perjury.	Dec. 27, '83	3
Davidson.....	Kizer, Reuben.....	colored	Murder.	March 5, '84	15
Shelby... ..	Kounz, Frank.....	white	Housebr'g & Lar'ny.	Nov. 10, —	3
Blount.....	Lakey, John.....	white	Murder.	May 6, '79	Life.
Haywood... ..	Lennard, Tom.....	white	Grand Larceny.	July 14, '80	6
Decatur	Liles, Grove.....	white	Murder.	Aug. 20, '79	15
Weakley	Loin, J. A.....	white	Murder.	June 6, '82	10
Bedford.....	Lovelace, Henry.....	white	Fraud. Br. of Trust.	March 12, '83	4
McNairy	Linsey, C. C.....	white	Larceny.	Jan. 12, '83	3
Tipton... ..	Lewis, Abe.....	colored	Murder.	Jan. 23, '79	10
Fayette.. ..	Larkin, Will.....	colored	Murder.	July 20, '75	15
Shelby... ..	Latimore, Bill.....	colored	Assault and Murder.	March 19, '79	10
Davidson.....	Long, Frank.....	colored	Larceny.	June 13, '82	7
Maury	Lawrence, Mark.....	colored	Larceny.	June 16, '82	5
Hardeman....	Lloyd, Britt.....	colored	Larceny.	August 5, '82	5
Davidson.....	Lewis, Charlie.....	colored	Larceny.	Dec. 1, '82	5
Shelby... ..	Larry, David.....	colored	Murder.	Nov. 8, '75	20
Shelby... ..	Lucas, Wm.....	colored	Murder.	May 28, '79	10
Hardeman... ..	Lindsley, John.....	colored	Larceny.	Dec. 6, '82	4
Shelby... ..	Lyon, Joseph.....	colored	Robbery.	March 5, '84	9
Polk.....	Lyle, Wm.....	white	Housebr'g & Lar.	Feb. 19, '84	3
Rutherford ...	Lytle, Thos.....	colored	Housebr'g & Lar.	April 18, '84	4

Shelby	Lewis, Frank.....	colored	Murder.	March 29, '84	16
Shelby	Loeb, Oscar.....	white	Larceny.	Aug. 20, '84	3
Shelby	Morris, Mat.....	white	Robbery.	June 24, '75	21
Sullivan.....	Miles, F. C.....	white	Murder.	Dec. 7, '78	10
Munroe.....	Millsaps, Jaspert.....	white	Murder.	Nov. 19, '80	Life.
Knox.....	Mangrum, John.....	white	Robbery.	Dec. 3, '73	21
Claiborne	Massengale, Joe.....	white	Murder.	Nov. 7, '74	Life.
Sumner.....	Miller, J. W.....	white	False Pretense.	March 12, '83	4
Marshall	Mathews, John C.....	white	Horsestealing.	Feb. 28, '81	5
Davidson	Mullins, James A.....	white	Forgery.	Nov. 17, '82	6
Shelby	Morton, Thos. B.....	white	Grand Larceny.	Feb. 4, '83	3
Shelby	Miller, Steph.....	colored	Burg'y and Larceny.	Feb. 26, '81	18
Davidson.....	Moore, Bob.....	colored	Larceny.	Oct. 14, '81	6
Hamilton.....	Myrick, John.....	colored	Murder.	April 7, '80	20
Maury	Moore, Albert.....	colored	Horsestealing.	June 11, '80	8
Shelby	Morris, Benj.....	colored	Murder.	Oct. 8, '81	20
Davidson.....	Murry, Samuel.....	colored	Rape.	Jan. 13, '82	21
Sumner.....	Martin, Willie.....	colored	Rape.	Feb. 18, '82	10
Sumner.....	Martin, Walter.....	colored	Rape.	Feb. 18, '82	10
Fayette.....	McGill, Wash.....	white	Murder in 2d degree.	July 9, '82	10
Davidson.....	Morgan, Geo.....	white	Assault to Kill.	June 11, '78	10
Stewart.....	Mockbee, Robt.....	colored	Murder.	March 11, '79	17
Fayette.....	Morrow, Mack.....	colored	Murder.	Nov. 17, '79	Life.
Davidson.....	Moore, Thos.....	colored	Housebreaking.	Feb. 5, '81	7
Shelby	Meyo, Peter.....	colored	Murder in 2d degree.	May 24, '77	20
Montgomery..	Merriweather, Dave.....	colored	Obstructing R. R.	Dec. 24, '76	15
Madison.....	Miller, Daniel.....	colored	Crime against Nature.	June 6, '82	5
Davidson.....	Moorman, Simon	colored	Larceny.	Nov. 4, '82	3

CONVICTS IN THE MAIN PRISON, NOV. 30, 1884.

COUNTY.	NAME.	COLOR.	CRIME.	COM. OF SENTENCE.	YEARS
Dyer	Mayfield, Sam.....	colored	Murder.	June 6, '82	Life.
Hawkins	Messer, Wm.....	white	Rape.	Nov. 1, '80	10
Davidson	Morton, Jake.....	colored	Larceny.	June 5, '83	8
Tipton	Martin, Oscar.....	colored	Murder.	Sept. 22, '83	5
Giles.....	Merrell, John.....	white	Larceny.	Dec. 15, '83	3
Lawrence.....	Mitchell, Wm.....	white	Larceny.	Dec. 30, '83	6
Franklin	Miller, Mose.....	white	Robbery.	Jan. 21, '84	5
Maury	Morgan, Wm.....	colored	Larceny.	Feb. 15, '84	1
Houston	Moore, Frank.....	white	Burglary.	April 7, '84	3
Maury	Moore, Dan.....	colored	Larceny.	June 14, '84	2
Shelby... ..	Morris, Charlie.....	colored	Grand Larceny.	Sept. 26, '84	3
Shelby	Myers, Alex.....	white	Petit Larceny.	Sept. 10, '84	1
Shelby... ..	Martin, Rube.....	colored	Grand Larceny.	Nov. 15, —	3
Shelby... ..	Moody, John.....	colored	Grand Larceny.	18, '84	2 5 mos & 4 days.
Marshall	McCool, John.....	white	Horsestealing.	Feb. 26, '79	8 1/2
Tipton	McCarty, John.....	white	Larceny.	Jan. 22, '81	5
Marshall.....	McMillon, John.....	white	Horsestealing.	Feb. 26, '79	8
Gibson.....	McDermott, W. H. C.....	white	Rape.	Dec. 4, '82	12
Hardeman.....	McCurley, John.....	white	Vol. Manslaughter.	Dec. 6, '82	5
Davidson.....	McManus, John.....	white	False Pretense.	Nov. 3, '82	15
Haywood.....	McTaylor, Lewis.....	colored	Murder.	Nov. 12, '80	10
Davidson.....	McCoy, Andrew.....	colored	Larceny.	May 26, '82	17 6 mos & 29 days.

Dyer	McAlister, James.....	white	Larceny.	Feb. 1, '84	4
Dyer	McGee, Tom.....	white	Larceny.	Feb. 1, '84	2
Shelby	McLean, John.....	white	Burg. and Larceny.	March 19, '84	4
Shelby	McKnight, Wm.....	white	Petit Larceny.	April 24, '84	4
Williamson ..	McEwen, Alf.....	colored	Larceny.	Nov. 29, '84	2
Henderson ..	Nolen, Steph.....	white	Housebreaking.	Nov. 23, '81	2
Marion.....	Newman, James.....	white	Housebreaking.	July 13, '82	5
Knox.....	Nance, Wm.....	white	Murder in 2d degree.	Jan. 27, '83	3
Fayette.....	Nelson, Charlie.....	colored	Malicious Shooting.	March 16, '81	16
Haywood.....	Nevils, Wm.....	colored	Larceny.	July 1, '82	5
Haywood.....	Neal, Rolley	colored	Murder.	Nov. 3, '82	3
Lawrence.....	Nelson, John.....	colored	Rape.	Nov. 28, '79	Life.
Hardeman.....	Nearin, Wm.....	colored	Forgery.	Aug. 3, '82	20
Madison.....	Newsom, Jerry.....	colored	Forgery.	April 23, '83	3
Shelby	Newton, H. L.	white	Grand Larceny.	May 6, '84	3
Montgomery ..	O'Donnell, Jack.....	white	Burglary.	Feb. 14, '77	13
Madison.....	Oliver, Jessie.....	colored	Rape.	Nov. 4, '79	2 sentences.
Davidson.....	Oglesby, Moses.....	colored	Larceny.	Nov. 31, '82	5
Shelby	Owens, Henry.....	white	Horsestealing.	Jan. 10, '84	3
Marshall	Porter, W. A.....	white	As. with Int. to Kill.	Nov. 20, '79	15
Shelby	Pitman, J. P.....	white	Mulestealing.	Dec. 22, '77	10
Tipton	Parish, W. H.....	white	Murder.	May 25, '74	20
Marion	Plumer, Sam.....	white	Housebreaking.	Sept. 25, '74	5
Rutherford ..	Pirtle, Eli.....	white	Horsestealing.	July 13, '82	5
Jackson	Pippin, Hogan.....	white	Assault to Murder.	Aug. 22, '82	5
Maury	Parham, Tom.....	white	Larceny.	March 9, '82	5
Franklin	Poe, John.....	white	Murder.	Feb. 19, '83	3
Franklin	Poe, Cicero.....	white	Murder.	March 12, '83	Life.
				March 12, '83	Life.

CONVICTS IN THE MAIN PRISON, NOVEMBER 30, 1884.

COUNTY.	NAME.	COLOR.	CRIME.	COM. OF SENTENCE.	YEARS.
Rutherford ...	Pate, Houston.....	colored	Larceny.	Aug. 25, '82	5
Carroll	Pearce, Thomas.....	colored	Larceny.	Sept. 23, '82	3
Davidson.....	Patton, Wm.....	colored	Housebreaking.	Oct. 30, '82	15
Davidson.....	Percely, Albert.....	colored	Assault to Murder.	Nov. 1, '82	15
Shelby	Pointer, Lewis.....	colored	Larceny.	March 11, '83	3½
Shelby	Pickett, Wally.....	colored	False Pretense.	Oct. 6, '82	5
Crockett	Powell, Alfred.....	colored	Incest.	June 12, '81	5
Wayne.....	Porter, James.....	colored	Assault to Rape.	June 21, '21	10
Davidson.....	Price, George.....	colored	Larceny.	Nov. 10, '82	6
McNairy	Pears, Tom.....	white	Larceny.	May 20, '83	6
Jackson	Price, George.....	white	Housebreaking.	May 22, '83	3
McNairy	Prater, Ephraim.....	colored	Assault to Murder.	Sept. 17, '83	10
Dickson... ..	Painter, Rollie.....	white	Assault to Murder.	March 19, '84	3
Dyer	Pearson, Steph.....	colored	Larceny.	May 23, '84	3
Shelby	Petway, Wm.....	colored	Grand Larceny.	Jan. 5, '83	3
Davidson.....	Powell, Wm.....	white	Murder.	Oct. 27, '84	10
Maury	Riddle, Frank.....	white	Murder.	Dec. 2, '72	Life.
Greene.....	Reynolds, Clement..	white	Murder.	Feb. 22, '71	20
Henry	Reigh, W. E.....	white	Ass. with in. to Rape	Feb. 14, '79	13
Maury	Rice, S.....	white	Horsestealing.	Feb. 16, '82	10
Madison.....	Ryan, J. V.....	white	Grand Larceny.	Feb. 28, '82	7½
Washington ..	Rader, W. H.....	white	Vol. Manslaughter.	Oct. 20, '82	10

Hawkins	Ross, A. L.	white	Larceny.	Jan. 31, '82	5
Cannon	Rushing, A.	colored	Murder in 2d degree.	Jan. 13, '80	10
Davidson	Ryan, W.	white	Larceny.	June 10, '80	7
Shelby	Randolph, Walter.	colored	Larc'y from Person.	Jan. 23, '82	10
Williamson	Roberts, John	colored	Horsestealing.	March 9, '82	5
Shelby	Rivers, Bill	colored	Murder.	May 59, '82	Life.
Davidson	Reed, Jasper	colored	Larceny.	June 5, '82	5
Jackson	Rodgers, Wm	white	Forgery.	Jan. 26, '83	3
Giles.	Rhodes, Wiley	colored		Feb. 19, '83	12½
Davidson	Rodgers, John	white	Housebreaking.	Sept. 11, '79	8
Davidson	Reams, William	colored	Burg. and Larceny.	Jan. 24, '81	7½
Hamilton. ...	Rawlins, Thomas.	colored	Grand Larceny.	Oct. 6, '77	18
McNairy	Rodgers, Harrison	colored	Assault to Rape.	March 15, '79	10
Hardeman	Robinson, Eph	colored	Assault to Rape.	Nov. 30, '77	16
Shelby	Ross, Rob	colored	Murder.	April 14, '82	Life.
Lauderdale ...	Rice, David	colored	Murder.	June 12, '81	Life.
Shelby	Riley, Matt	colored	Burglary.	Dec. 21, '81	10
Davidson	Robertson, Jack	colored	Lar. & Housebr'k'g.	Sept. 20, '82	3
Shelby	Ross, Alfred	colored	Assault to Murder.	Oct. 15, '82	7
Fayette	Robertson, Joe	colored	Rape.	March 16, '81	21
Tipton!	Rutherford, A. L.	colored	Invol. Manslaughter.	May 13, '83	3
Madison	Roberts, John	white	Grand Larceny.	June 23, '83	5
Lawrence	Riggs, Jonas	white	Larceny.	Sept. 3, '83	10
Shelby	Ramsey, George	colored	Assault to Kill.	Jan. 12, '84	2
Putnam	Randolph, John	white	Perjury.	March 14, '84	5
Olin	Ridle, Will	white	Grand Larceny.	March 14, '84	3
Davidson	Robertson, Tom	colored	Grand Larceny.	March 26, '84	8
Rutherford	Roberts, A. J	white	Larceny.	April 18, '84	2

Prison.

CONVICTS IN THE MAIN PRISON, NOV. 30, 1884.

COUNTY.	NAME.	COLOR.	CRIME.	COM. OF SENTENCE.	REMARKS.
Hardeman....	Robinson, George.....	colored	Obstructing Railroad	Nov. 28, '84	10
Knox.....	Shrewsbury, Robt.....	white	Murder.	Sept. 24, '79	15
Shelby	Sturgeon, Louis.....	white	Murder.	Aug. 15, '73	Life.
Hardin.. ..	Statum, J. C.....	white	Horsestealing.	Sept. 23, '78	10
Bedford... ..	Smithson, Geo.....	white	Horsestealing.	Feb. 5, '81	5
Crockett.....	Smith, Phil.....	white	Murder.	May 17, '80	15
Knox.....	Sartin, Lunn.....	white	Horsestealing.	Nov. 10, '81	7 2 sentences.
Lawrence	Sandy, A. J. M.....	white	Poisoning Stock.	Dec. 29, '81	5
Montgomery .	Smith, Geo.....	white	Larceny & False Pre.	June 20, '82	5 3 sentences.
Carroll.....	Statton, Tap.....	colored	Murder.	April 30, '77	10
Shelby	Smith, Daniel.....	colored	Murder.	Life.	
Maury	Shephard, Sanis.....	colored	Housebreaking.	Feb. 16, '82	4 1/2
Shelby	Shaw, Reuben.....	colored	Housebrk'g, Lar'y & Assault to Murder.	Dec. 22, '82	22
Davidson.....	Shephard, Sam.....	colored	Housebreaking.	Nov. 14, '82	3
Shelby	Smith, Henry.....	colored	Murder.	March 6, '80	Life.
Shelby	Shelton, Lawson.....	colored	Murder.	June 3, '81	20
Davidson.....	Smith, Henry.....	colored	Housebreaking.	March 4, '82	4
Davidson.....	Strong, Wm.....	colored	Larceny.	June 10, '82	3
Madison	Smith, Henry.....	colored	Forgery.	June 16, '82	3
Marshall.....	Simmons, Wm.....	colored	False Pretense.	June 19, '82	4
Marshall.....	Swan, Mose.....	colored	Housebreaking.	Feb. 20, '83	4

Davidson.....	Stratton, James.....	colored	Larceny.	Feb.	12, '81	8	2 sentences.
Montgomery..	Senceny, Solomon.....	colored	Larceny.	Dec.	21, '82	3	
Davidson.....	Secil, Henry.....	colored	Larceny.	Sept.	20, '82	5	
Tipton.....	Smith, George.....	white	Larceny.	May	23, '83	6	
Dyer.....	Samuels, William.....	white	Larceny.	May	23, '83	3	
Davidson.....	Smith, W.....	colored	Houseb'k'g & Lar'y.	Feb.	6, '82	8	
Lauderdale...	Smith, Clark.....	colored	Lar. & rec'g stl'n g's	June	15, '83	3	
Henderson ..	Sullivan, Joe.....	white	Horsestealing.	July	18, '83	8	
Davidson.....	Stitt, Emery.....	white	Robbery.	Sept.	7, '83	10	
Davidson.....	Sullivan, John.....	white	Petit Larceny.	Feb.	27, '84	1	
Weakley	Seals, Jim.....	colored	Larceny.	Feb.	26, '84	1½	
Weakley.....	Seals, Anthony.....	colored	Larceny.	Feb.	26, '84	1½	
Shelby...	Smith, Jim.....	colored	Petit Larceny.	April	2, '84	3	
Rutherford....	Scudder, Bud.....	colored	Larceny from P rson	April	14, '84	3	4 sentences.
Shelby....	Scott, Ch. E.....	white	Larceny.	April	24, '84	15	2 sentences.
Clay.....	Saddler, Dock.....	colored	Housebreaking.	Oct.	16, '84	3	
Davidson.....	Simmonton, Jack.....	colored	Larceny.	Oct.	25, '84	3	
DeKalb	Smith, Lorenzo.....	colored	Burglary.	Nov.	22, '84	5	
Sullivan.....	Tarter, Robt.....	white		Oct.	27, '79	15	
Montgomery..	Thompson, Allen.....	white	Larceny.	Dec.	11, '80	6	2 sentences.
Henderson ...	Thompson, James.....	white	Housebreaking.	Nov.	23, '81	5	
McNairy	Takett, Morgan.....	white	Murder.	Jan.	20, '82	20	
Cannon	Tuker, James.....	white	Tk'g female for pr'n.	March	9, '82	10	
Maury	Thomason, Israel.....	white	Murder.	March	16, '77	Life.	
Haywood.....	Transon, Bill.....	colored	Housebreaking.	Nov.	12, '80	23	3 sentences.
Davidson.....	Taylor, William.....	colored	Murder.	March	12, '81	Life.	
Maury	Thomas, John.....	colored	Housebreaking.	June	9, '81	5	2 sentences.
Humphreys...	Turner, Jerry.....	colored	Rape.	July	27, '82	Life.	

CONVICTS IN THE MAIN PRISON, NOVEMBER 30, 1884.

COUNTY.	NAME.	COLOR.	CRIME.	COM. OF SENTENCE.	Years
Davidson	Townsend, Bowling.....	colored	Larceny.	June 5, '82	5
Crockett.....	Turner, Phil.....	colored	Murder.	Feb. 1, '83	10
Davidson	Thomas, Houston.....	colored	Larceny.	Nov. 9, '81	7
Crockett	Todd, John.....	white	Assault to Murder.	June 7, '83	5 sentences.
Lauderdale ..	Thompson, James.....	white	Murder.	June 15, '83	2
Henry	Tharpe, Henry.....	colored	Murder.	June 22, '83	2
Shelby	Taylor, Dennis.....	colored	Murder.	Oct. 27, '83	Life.
Williamson ..	Thomas, Cicero.....	colored	Burglary.	Feb. 7, '84	8
Davidson	Toombs, C. D.....	white	Robbery.	March 5, '84	15
Davidson	Thomas, John.....	white	Murder.	March 20, '84	10
Shelby... ..	Taylor, James.....	white	Forgery.	April 3, '84	3
Davidson	Thompson, Emanuel.....	colored	Larceny.	March 13, '84	3
Shelby.....	Taylor, Tom.....	colored	Assault to Murder.	May 23, '84	1
Fayette.....	Thompson, John D.....	white	Assault to Murder.	Nov. 14, '84	21
Williamson ..	Thompson, John.....	colored	Housebreaking.	Nov. 29, '84	34
Maury	Voorhies, Phil.....	colored	Larceny.	Oct. 21, '82	5
Hardeman.....	Valentine, Fred.....	colored	Voluntary Mansl'r.	Dec. 6, '82	8
Sumner.....	Veach, John.....	white	Larceny.	March 8, '81	7
Davidson	Vaughn, Jack.....	white	Housebr'g & Larceny	Oct. 13, '83	8
Montgomery ..	Walker, Chas.....	white	Horsestealing.	Jan. 21, '81	8 2 sentences.
Giles.. ..	Williams, W. T.....	white	Horsestealing.	Feb. 1, '81	8
Meigs.....	Wyrick, Hardy.....	colored	Murder.	Feb. 13, '72	Life.

Davidson.....	Woods, Felix H.....	colored	Larceny.	June 11, '78	10	3 sentences.
Montgomery..	Woolridge, Bluford.....	colored	Not given.	March 17, '77	21	
Henry	Wright, Rolly	colored	Murder.	Oct. 11, '80	11	
Fayette.. ..	Walker, Henry.....	colored	Rape.	March 16, '81	15	
Giles.....	White, Felix.....	colored	Burglary.	April 14, '81	5	
Shelby	White, John.....	colored	Murder	June 17, '74	20	
Davidson.....	Walkins, Green.....	colored	Larceny.	Feb. 11, '82	4	
Maury	Webster, Dave.....	colored	Larceny.	Oct. 19, '81	3	
Davidson	Woods, John.....	colored	Housebreaking.	Feb. 1, '83	3	
Decatur	Wallace, Ross.....	colored	Perjury.	March 16, '83	3	
Crockett	Weaver, Ike.....	colored	Arson.	Oct. 16, '80	6	
Davidson.....	Watkins, Jake.....	colored	Burg'y and Larceny.	Nov. 6, '76	25	
Maury	Warner, Squire.....	colored	Horsestealing.	Aug. 20, '78	10	2 sentences.
Davidson.....	Wilson, John.....	colored	Larceny.	Oct. 6, '81	6	
Madison.....	Wilson, Henry.....	colored	Larceny.	June 6, '82	3	
Fayette.....	Waller, Horace.....	colored	Larceny.	Nov. 4, '82	3	
Haywood.....	Wilkes, Isaac.. ..	colored	Larceny.	Nov. 10, '82	3	2 sentences.
Haywood.....	Walker, Ben.....	colored	Larceny.	March 21, '83	3	
Montgomery..	Wilcox, Shelby.....	colored	Not given.	March 4, '80	15	
Haywood....	Williams, Charles.....	white	Housebreaking.	August 13, '81	5	
Dickson... ..	White, Andrew....	white	Murder.	March 31, '82	Life.	
Hardeman. ...	Williams, Ike.....	colored	Housebr'ng Larceny.	August 1, '83	6	
Bedford.	Winston, John.....	colored	Fraud. Br. of Trust.	Dec. 18, '83	1½	
Hardeman....	Walsh, William.....	white	Housebr'g & Lar.	Dec. 2, '83	10	
Shelby	Woods, John.....	white	Petit Larceny.	Jan. 5, '84	1	
Maury	Wheatley, Elias.....	colored	Assault to Kill.	Feb. 5, '84	2	
Fayette.....	Wirt, Green.....	colored	Larceny from Pers'n	March 19, '84	2½	
Shelby.....	Williams, Brandy.....	colored	Assault to Murder.	March 29, '84	5	

CONVICTS IN THE MAIN PRISON, NOV. 30, 1884.

COUNTY.	NAME.	COLOR.	CRIME.	COM. OF SENTENCE.	REMARKS.
McNairy	Williams, Stanford.....	white	Murder.	May 25, '84	16
Benton.....	Wilson, A. W.....	white	Assault to Murder.	May 30, '84	3
Hardeman....	Washington, George.....	colored	Housebr'g and Lar.	July 27, '84	10
McNairy	Walls, Frank.....	white	Attempt to Murder.	Sept. 19, '84	1
Wayne.....	West, Whit.....	white	Larceny & Burgl'ry.	Oct. 19, '84	3
Maury	Walter, Daniel.....	white	Assault to Murder.	Oct. 19, '84	10
Shelby	Walker, Jeff.....	colored	Malicious Cutting.	Nov. 17, '84	2
Morgan.....	Young, Solomon.....	colored	Murder.	Dec. 28, '78	Life.
Shelby	Young, Thomas.....	colored	Murder.	Feb. 10, '74	15
Obion.....	Younger, Henry.....	colored	Rape.	Dec. 6, '83	Life.

CONVICTS IN PRISON ON DR. WILLIAM MORROW'S FARM, NOV. 30, 1884.

COUNTY.	NAM .	COLOR.	CRIME.	COM. OF SENTENCE.	YEARS.
Gibson.....	Bright, Bettie.....	colored	Housebreaking.	Dec. 30, '82	3
Shelby..	Buster, Butler.....	colored	Murder.	May 22, '77	10
Davidson.....	Burley, Ed.....	colored	False Pretense.	June 4, '83	5
Shelby..	Brown, Ralph.....	colored	Manslaughter.	Sept. 14, '83	1½ less 14 dys.
Davidson.....	Cranshaw, David	colored	Larceny.	March 14, '79	10
Gibson.....	Clayton, Callie.....	colored	Housebreaking.	Dec. 5, '83	3
Davidson.....	Gleaves, Maggie.....	colored	Larceny.	Nov. 22, '82	3
Sumner.....	Hanner, Peter.....	colored	Larceny and Burgl'y.	Nov. 9, '82	5
Gibson	Hennings, Jane.....	colored	Larceny.	August 3, '83	2
Davidson.....	Hudson, Sam.....	colored	Larceny.	June 16, '83	2
Davidson.....	Herd, Mary.....	colored	Larceny.	March 14, '84	1
Shelby..	Johnson, Ed.	colored	Larceny.	Dec. 1, '82	3
Maury	Johnson, Tom.....	colored	Housebreaking.	Oct. 19, '84	3
Davidson.....	Morton, Mary.....	colored	Larceny from person.	Nov. 13, '82	3
Lauderdale...	Mahan, Anderson.....	colored	Rec'g Stolen Goods.	June 15, '83	3
Davidson.....	Magdalene, Mary.....	colored	Kidnapping.	June 24, '84	1
Anderson.....	Nelson, Wm.....	colored	Housebreaking.	July 11, '82	3
Shelby.....	Norris, Manda.....	colored	Frd'nt br. of Tr.	July 14, '84	2
Shelby... ..	Stewart, Bob.....	colored	Grand Larceny.	June 22, '82	2 sentences.
Hamilton.....	Sutton, Molly.....	colored	Larceny.	June 20, '84	4
Montgomery..	Tinslie, Virgie.....	colored	Housebreaking.	June 7, '84	3
					1

FEMALE CONVICTS IN MAIN PRISON, NOV. 30, 1884.

COUNTY.	NAME.	COLOR.	CRIME.	COM. OF SENTENCE.	YEARS.
Shelby	Allen, Lettie	colored	Recv'g Stolen Goods.	Sept. 26, '84	2 sentences.
Davidson	Burns, Christina	colored	Larceny.	Nov. 17, '82	3
Shelby	Barlow, Ella	white	Larceny.	May 25, '84	3
Davidson	Carter, Missouri	colored	Larceny.	June 23, '84	4
Sumner	Husky, Ann	colored	Larceny.	July 17, '83	3
Sumner	Husky, Nora	colored	Larceny.	July 17, '83	3
Davidson	Harding, Dolly	colored	Larceny.	June 23, '84	1
Hamilton	Johnson, Minerva	colored	Murder.	June 20, '84	10
Shelby	Long, Rachel	colored	Perjury.	June 30, '84	3
Cannon	Martin, Adaline	colored	Perjury.	March 9, '83	Life.
Davidson	Shelton, Lockey	colored	Murder.	July 11, '83	2
Williamson	Tarkington, Fannie	colored	Malicious Stabbing.	March 11, '79	10
Davidson	Thompson, Sallie	colored	Murder.	Oct. 19, '83	2
Stewart	Walter, Alice	colored	Larceny.	Aug. 20, '84	1
Davidson	Warren, Bettie	colored	Larceny.	March 14, '84	1
Davidson	Williams, Nancy	colored	Larceny.	May 28, '84	5
Davidson	Williams, Parlee	colored	Murder.	March 14, '84	1
Shelby	Young, Mollie	colored	Assault.	March 17, '84	5
Maury	Kesee, Cora	colored	Burglary.	March 17, '84	2 sentences.
Shelby	Jones, Mary	colored	Petit Larceny.	Oct. 19, '84	1
Davidson	Hunter, Harriett	colored	Lar. from Person.	Nov. 17, '84	3
Davidson	Dean, Lizzie	colored	Larceny.	Nov. 29, '84	1
Davidson	Dean, Lizzie	colored	Larceny.	Nov. 29, '84	1

NAMES OF PRISONERS AT TRACY CITY NOV. 30, 1884.

COUNTY.	NAME	COLOR.	CRIME.	COM. OF SENTENCES.	YEARS
Fayette.....	Alexander, John.....	colored	Housebreaking.	March 2, '76	15
Maury	Andrews, Dick.....	colored	Malicious stabbing.	Feb. 16, '81	6
Davidson.....	Allen, Jim.....	colored	Larceny.	March 2, '81	8
Davidson.....	Anderson, Wm.....	colored	Larceny.	Nov. 18, '82	3
Davidson.....	Appleton, Wm.....	white	Larceny.	Sept. 7, '83	3
Maury	Alexander, Charlie.....	colored	Larceny.	Feb. 15, '84	2
Grundy	Anderson, George	colored	Assault to Kill.	May 22, '84	1
Maury	Anderson, Wes.....	colored	Assault to Kill.	Oct. 19, '84	1
Shelby	Anderson, Jos.....	colored	Larceny.	July 11, '79	7
Lincoln	Allen, Jim.....	colored	Larceny.	Nov. 13, '84	1
Shelby	Brown, Sam.....	colored	Grand Larceny.	Dec. 23, '81	4
Tipton	Bynum, Bob.....	colored	Housebreaking.	May 22, '77	10
Roane.....	Brown, John.....	white	Rape.	Dec. 14, '78	12
Hamilton... ..	Bruce, James	colored	Murder.	April 7, '80	15
Shelby... ..	Bibby, Ed.....	colored	Manlaughter.	March 27, '81	6
Hickman	Body, Abraham	colored	Larceny.	June 25, '81	5
Hamilton.....	Burgis, Isaac	colored	Larceny from person.	Dec. 2, '81	7
Trousdale	Bennett, Henry.....	colored	Lar. & rec. stol. goods	Dec. 29, '80	5½
Tipton... ..	Bumpass, Anderson.....	colored	Larceny.	Jan. 18, '82	4
Davidson.....	Bass, John	colored	Larceny.	Nov. 4, '82	3
Monroe.....	Brewder, Stephen.....	colored	Obstructing Railro'd.	Jan. 8, '83	3
Lincoln	Buchanan, Ch.....	colored	Perjury.	March 19, '83	3

2 sentences.

NAMES OF PRISONERS AT TRACY CITY, NOV. 30, 1884.

COUNTY.	NAME.	COLOR.	CRIME.	COM. OF SENTENCE.	YEARS.
Hardeman.....	Brown, Redd.....	colored	Larceny.	March 26, '83	2
Bradley	Bowman, John	colored	Housebreaking.	May 22, '83	3
Shelby	Bowling, Jack	colored	Malicious Cutting.	Sept. 15, '83	2
Davidson.....	Banks, Will.....	colored	Larceny.	Oct. 8, '83	3
Carroll.....	Bilberry, Frank.....	white	Lar. & Housebr'k'g	Sept. 10, '83	2
Cheatham.....	Bass, Richard.....	colored	Burg. and Larceny.	Oct. 16, '83	3
Shelby	Bartlett, T. M	white	Fraudl'nt bre. trust.	Oct. 23, '83	2
Fayette.....	Bowers, Southerland	white	Lar. & rec. sto. goods	Nov. 2, '83	3
Weakley	Blair, Felix.....	colored	Lar. & Housebr'k'g.	Nov. 8, '83	3
Weakley	Bell, Henry	colored	Grand Larceny.	Nov. 8, '83	3
Shelby	Brown, Marshall.....	colored	Malicious Cutting.	Oct. 31, '83	5
Lincoln	Buchanan, Blue John.....	colored	Larceny.	Nov. 13, '83	2
Shelby	Bedford, Henry	colored	Housebr'k'g & Lar.	Dec. 10, '83	11
Hamilton	Barber, Thomas.....	colored	Larceny.	Feb. 23, '84	3
Davidson	Banks, Will.....	colored	Larceny from person.	March 5, '84	3
Montgomery .	Buckner, Albert.....	colored	Larceny.	March 5, '84	3
Haywood	Bond, John.....	colored	Larceny.	March 13, '84	2
Houston	Brigham, Alf.....	colored	Poisoning Stock.	March 10, '84	1
Franklin	Burks, William.....	colored	Larceny.	March 27, '84	2½
DeKalb	Brimer, James.....	white	Grand Larceny.	March 24, '84	3
Dyer	Barrett, George.....	white	Larceny.	May 23, '84	1
Montgomery .	Brown, Anthony.....	colored	Housebreaking.	June 7, '84	3

Shelby.....	Broadnax, Wm.....	colored	Lar. from Person.	May 6, '84	3
Warren.....	Boyd, Criss.....	white	Larceny.	May 29, '84	1
Hamilton.....	Buchanan, Geo.....	colored	Larceny.	June 20, '84	3
Hamilton.....	Brown, Wm.....	colored	Larceny.	June 20, '84	1
Shelby.....	Burrill, Tom.....	colored	Larceny.	June 30, '84	2
Shelby.....	Blackwell, Geo.....	colored	Larceny.	June 30, '84	2
Davidson.....	Bray, General.....	colored	Larceny.	June 28, '84	1
Shelby.....	Burus, John.....	white	Assault to Rape.	Sept. 27, '84	2
Davidson.....	Bennett, John.....	colored	Larceny.	March 14, '84	2
Davidson.....	Cantrell, Wm.....	colored	Murder.	March 3, '77	20
Davidson.....	Cannon, John.....	colored	Burglary & Larceny.	Oct. 22, '77	8
Monroe.....	Cosby, Wm.....	colored	Housebrk'g Lar.	Sept. 11, '79	8
Giles.....	Collier, Dick.....	colored	Housebrk'g Lar.	Aug. 15, '79	8
McMinn.....	Carter, John.....	colored	Murder in 2d degree.	Dec. 12, '79	15
Davidson.....	Chears, Ed.....	colored	Larceny.	March 18, '79	8
Rutherford.....	Carter, Henry.....	colored	Rape.	Dec. 20, '80	15
Madison.....	Conley, Alex.....	colored	Obstructing R. R.	June 24, '80	8
Davidson.....	Carman, Wm.....	colored	Larceny.	Jan. 20, '82	5
Madison.....	Chambers, Rob.....	colored	Burglary.	June 30, '81	5
Crockett.....	Cole, Moses.....	colored	Burglary.	June 10, '82	5
Bedford.....	Chum, Hamp.....	colored	Housebreaking.	April 19, '83	2
McMinn.....	Colville, James.....	colored	Assault to Rape.	April 24, '83	2
Bradley.....	Covey, Alf.....	colored	Rape.	Sept. 12, '83	8
Haywood.....	Cashman, W. J.....	white	Housebreaking.	June 6, '82	5
Crockett.....	Clark, Jack.....	colored	Larceny.	Feb. 8, '84	1
Mauzy.....	Chappell, Horace.....	colored	Burglary.	Feb. 15, '84	6
Mauzy.....	Chriltenden, Geo.....	colored	Larceny.	Feb. 15, '84	14
Hamilton.....	Carden, Perry.....	white	Larceny.	Feb. 23, '84	1

Franklin	Dickens, Henry.....	colored	Horsestealing.	Dec.	5, '83	3
Gibson.....	Davis, William.....	white	Larceny.	Jan.	2, '84	2
Shelby	Dow, Fortune.....	colored	Lar. from Person.	Jan.	12, '84	3
Shelby... ..	Nelson, Dwyer	colored	Manslaughter.	March	8, '84	3
Madison... ..	Dunlap, Horace.	colored	False Pretense.	March	5, '84	5
Davidson.....	Douglass, William.....	colored	Larceny.	Jan.	30, '83	3
Bedford.....	Driver, Jack.....	colored	Larceny.	April	15, '84	1
Gibson.....	Drake, W.....	colored	Larceny.	May	22, '84	1
Grundy	Duke, George.....	colored	Larceny.	May	21, '84	1
Hamilton.. ..	Dunagan, Dick.....	colored	Larceny.	June	20, '84	2
Marshall	Dysart, Jack.....	colored	Larceny.	June	17, '84	7
Davidson.....	Elliot, Sherman	colored	Assault to Murder.	June	30, '82	9
Warren.. ..	Evans, Ed.....	colored	Lar. and Housebr'g.	Oct.	5, '83	3
Dyer	Eaton, Ronn.....	white	Lar. and Housebr'g.	Sept.	22, '83	4
Shelby... ..	Edmonds, Henry.....	colored	Horsestealing.	Nov.	27, '83	8
Williamson ..	Edmondson, Robb	colored	Grand Larceny.	March	26, '84	5
Wilson.....	Ellis, Thos.....	colored	Larceny.	May	22, '76	21
Shelby	Foster, Sam.....	colored	Housebreaking.	Dec.	16, '74	20
Davidson.....	Floyd, Thomas.....	colored	Murder.	Dec.	14, '72	21
Haywood.....	Farrington, Garl.....	colored	Mahe.	Nov.	10, '82	5
Bradley.	Freeman, W. T.....	white	Larceny.	Sept.	16, '82	3
Maury	Freison, Jerry.....	colored	Housebreaking.	Jan.	12, '83	7
Giles.....	Ferlin, Martha.....	colored	Burglary.	April	11, '82	4
Shelby... ..	Foster, Charles.....	colored	Larceny.	Feb.	2, '84	3
Davidson.....	Fanning, Charles.....	colored	Larceny.	March	5, '84	4
Davidson.....	Finnacune, Jas. P.....	white	Larceny.	March	5, '84	5
Davidson.....	Fletcher, Sue.....	colored	Assault to Murder.	Sept.	5, '82	4
Crockett.....	Fitzpatrick, L. M.....	white	Larceny from Person.	May	20, '84	5
			Mulestealing.			3

2 sentences.

NAMES OF PRISONERS AT TRACY CITY, NOV. 30, 1884.

(46)

COUNTY.	NAME.	COLOR.	CRIME.	COM. OF SENTENCE.	YEARS.
Carroll.....	Ford, John	white	Petit Larceny.	May 23, '84	1½
Crockett.	Ford, Tom alias Hodge.....	colored	Bigamy.	Jan. 6, '84	
Lake.....	Floyd, James.....	colored	Larceny.	Dec. 12, '83	3
Moore	Ganaway, Andy.....	colored	Housebr. Larceny.	June 23, '82	3
Carter	Gales, Wm.....	colored	Attempt to Rape.	March 16, '76	21
Shelby	Gray, John, alias R. R.....	colored	Mulestealing.	Sept. 21, '76	14
Giles.....	Grigsby, Lewis.....	colored	Horsestealing.	Dec. 24, '81	3 22 days.
Giles.....	Gordon, Ebenezer.....	colored	Larceny.	Dec. 24, '81	6
Hamilton. ...	Gillespie, Lewis.....	colored	Burglary.	April 17, '82	4 2 sentences.
Fayette.....	Granburry, Reuben.....	colored	Murder in 2d degree.	July 9, '82	5
Bradley.....	Goins, Thomas.....	white	Housebreaking.	May 22, '83	15
McNairy	Gilton, William.....	white	Larceny.	May 20, '83	3
Bedford.....	Gamble, Jim.....	colored	Arson.	May 24, '83	3
Maury	Goodrum, Ellis.....	colored	Burglary & Larceny.	Aug. 11, '83	2
Davidson.....	Grier, Dad.....	colored	Malicious Stabbing.	Oct. 22, '83	3
Shelby	Gould, Thomas.....	colored	Grand Larceny.	Dec. 10, '83	2
Shelby	Gibson, John.....	colored	Grand Larceny.	Nov. 16, '83	3
Shelby	Goodrich, Solomon.....	colored	Petit Larceny.	Nov. 6, '83	5
Shelby	Gilliam, Buffalo... ..	colored	Lar. from Person.	Nov. 22, '83	3
Maury	Green, George.....	colored	Larceny.	Dec. 15, '84	3
Shelby.....	Greenlea, Anderson.....	colored	Larceny.	Feb. 20, '84	1
Montgomery..	Gill, Moss.....	colored	Perjury.	March 5, '84	1 3

Shelby.....	Green, Henry.....	colored	Petit Larceny.	April	2, '84	2	2 sentences.
Grundy.....	Grice, John.....	white	Forgery.	May	21, '84	3	
Hamilton..	Glover, Christian.....	colored	Larceny.	June	20, '84	1	
Shelby.....	Green, Henry.....	colored	Malicious cutting.	June	30, '84	2	
Davidson.....	Gates, Thomas.....	colored	Larceny.	June	25, '84	5	
Sevier.....	Green, Noah.....	white	Felonious Assault.	July	24, '84	2	
Hawkins.....	Gibson, Lee.....	white	Larceny.	June	6, '84	3	
Shelby.....	Harris, Robt.....	colored	Horsestealing.	Feb.	9, '81	7	
Shelby.....	Howell, Wm.....	colored	Larceny.	May	4, '83	3	
Davidson.....	Holder, Wm.....	colored	Housebreaking.	March	16, '77	10	
Lincoln.....	Holman, Arch.....	colored	Robbery.	March	15, '77	15	
Davidson.....	Harris, A. W.....	colored	Larceny of Horse.	March	8, '81	10	2 sentences.
Hamilton.....	Henderson, Fannie.....	colored	Robbery.	Aug.	2, '81	9	
Hamilton.....	Hill, Eliza.....	colored	Larceny from Pers'n	Dec.	2, '81	5	
Rhea.....	Harrison, Jake.....	colored	Larceny.	June	18, '82	3	
Montgomery..	Howard, Henry.....	colored	Larceny and Assault.	Dec.	11, '80	6	
Weakley.....	Hombeek, Eli.....	colored	Shoot'g with in. to k'l	Nov.	5, '82	4	
Hamilton..	Hart, Charles.....	colored	Larceny.	Dec.	17, '82	4	
Williamson ..	Hughes, Joe.....	colored	Larceny.	Nov.	21, '82	5	
Shelby.....	Hughes, Wm.....	colored	Grand Larceny.	April	19, '83	7	
Davidson ..	Harding, John.....	colored	Grand Larceny.	Jan.	30, '83	6	
Davidson.....	Houston, Jack.....	colored	Larceny.	Sept.	5, '83	2	
Davidson.....	Hodge, James.....	colored	Larceny.	Feb.	26, '83	6	
Bradley.....	Holcomb, Sylvester.....	white	Larceny.	Sept.	12, '83	3	
Davidson.....	Hardwick, Konrad.....	white	Rape and Arson.	Jan.	24, '81	12	
Greene.....	Holt, Perry.....	white	Larceny.	Oct.	12, '83	3	
Cooke.....	Hurley, Jacob.....	colored	Horsestealing.	July	27, '83	3	
Marshall.....	Heraldson, Will.....	colored	Assault to Murder.	Oct.	19, '83	2	

NAMES OF PRISONERS AT TRACY CITY, NOV. 30, 1884.

COUNTY.	NAME.	COLOR.	CRIME.	COM. OF SENTENCE.	YEARS
Lawrence....	Hendricks, Joseph.....	white	Housebreaking.	Aug. 31, '78	10
Shelby.....	Hunt, David.....	colored	Malicious Cutting.	Nov. 3, '83	2
Shelby.....	Hill, John.....	colored	Petit Larceny.	Dec. 10, '83	2
Shelby.....	Harris, Chas.....	white	Petit Larceny.	Nov. 20, '83	2
Shelby.....	Hillsman, Geo.....	colored	Petit Larceny.	Jan. 8, '84	1
Dyer.....	Harris, Jim.....	colored	Larceny.	Feb. 1, '84	2
Madison.....	Hall, John.....	colored	Larceny.	March 5, '84	2
Shelby.....	Hill, Mollie.....	colored	Larceny.	March 1, '84	3
Franklin.....	Hatch, Sol.....	white	Horsestealing.	April 4, '84	3
Tipton.....	Hutchinson, George.....	colored	Larceny.	May 29, '84	1
Lawrence.....	Helm, John.....	colored	Larceny.	May 4, '84	1
Warren.....	Hickerson, Berry.....	colored	Larceny.	June 3, '84	4
Knox.....	Hodge, Anderson.....	white	Larceny.	Sept. 24, '84	1
Shelby.....	Ingraham, John.....	colored	Malicious Stabbing.	April 12, '82	4
Davidson.....	Ingraham, Thos.....	white	Larceny.	Feb. 1, '82	5
Jefferson.....	Inman, Wesley.....	colored	Horsestealing.	April 16, '77	10
Shelby.....	Isam, Dick.....	colored	Larceny.	April 9, '83	3
Shelby.....	Jones, Henry.....	colored	Burglary.	April 9, '83	9
Shelby.....	Jones, John.....	colored	Larceny.	April 30, '83	2
Madison.....	Johnson, W. C.....	colored	Horsestealing.	March 3, '77	13
Madison.....	Johnson, Nels.....	colored	Malicious Cutting.	May 25, '81	5
Maury.....	Jennings, James.....	colored	Horsestealing.	Oct. 19, '81	5

3 sentences.

2 sentences.

Davidson	Jones, James.....	colored	Larceny.	Nov.	16, '82	3
Union	Jones, Henry.....	colored	Assault to Murder.	Nov.	28, '82	15
Davidson	Johnson, Andrew.....	colored	Larceny.	March	7, '82	5
Gibson	Jones, Jack.....	colored	Horsestealing.	Sept.	8, '83	3
Sumner.....	Justice, John.....	white	Larceny and bringing stl'n prop. in State.	Nov.	6, '83	3
Montgomery..	Johnson, Allen.....	colored	Petit Larceny.	Dec.	7, '83	3
Gibson	Jones, Wm.....	colored	Ob. money false pre.	Dec.	5, '83	2
Shelby.....	Jackson, Harry	colored	Larceny from person.	Feb.	2, '84	5
Hamilton	Jones, Thad.....	colored	Larceny.	Feb.	23, '84	5
Hamilton	Jones, Thomas.....	colored	Larceny.	Feb.	23, '84	3
Madison	Johnson, Charles.....	colored	Larceny.	March	5, '84	1
DeKalb.....	Johnson, James.....	white	Larceny.	March	24, '84	1
Williamson ..	Johnson, Sam.....	colored	Forgery.	March	26, '84	5
Shelby	James, Jim.....	colored	Larceny.	May	25, '84	3
Shelby	Johnson, Henry.....	colored	Grand Larceny.	May	24, '84	3
Wilson	Johnson, Frank.....	white	Petit Larceny.	June	6, '84	1
Houston	Joiner, Alex.....	colored	Housebreaking.	April	14, '83	3
Davidson	Johnson, Alex.....	colored	Larceny.	June	20, '84	7
Haywood..	Johnson, John.....	colored	Larceny.	July	4, '84	1
Davidson	Jones, Abe.....	colored	Larceny.	June	21, '84	2
Lincoln	Jennings, Chris.....	colored	Forgery.	July	9, '84	3
Davidson	James, Frank.....	white	Larceny.	March	14, '84	1
Williamson ..	Kinnard, Thos.....	colored	Horsestealing.	Feb.	27, '78	10
Bedford.....	Kiser, Lewis.....	colored	Petit Larceny.	April	15, '82	5
Davidson	Keeling, James.....	colored	Larceny.	Jan.	24, '80	3
Madison	Kimpball, Sava.....	colored	Grand Larceny.	Dec.	2, '83	3
McMinn.....	Kirby, Cal.....	white	Felonious Assault.	Feb.	11, '84	3

2 sentences.

NAMES OF PRISONERS AT TRACY CITY, NOV. 30, 1884.

COUNTY.	NAME.	COLOR.	CRIME.	COM. OF SENTENCE.	YEARS
Shelby	Kelly, Chas.....	white	Grand Larceny.	Feb. 20, '84	3
Shelby	Kennedy, Tom.....	white	Robbery.	March 8, '84	10
Lincoln	Kimbro, Joe.....	colored	Larceny.	July 15, '84	2
Madison.....	Ledbetter, Miles.....	colored	Housebreaking.	Nov. 14, '76	15
Haywood.....	Lowery, Sam.....	colored	Larceny from Person	March 6, '77	20
McNairy	Luttrell, Mose.....	colored	Larceny.	July 14, '80	2 sentences.
Madison.....	Long, Joseph.....	colored	Larceny.	March 5, '84	10
Giles.....	Lancaster, Tom.....	colored	Felonious Assault.	April 7, '84	1
Davidson.....	Lawrence, Sam.....	colored	Perjury.	March 12, '83	3
Bedford	Lock, Charlie.....	colored	Larceny.	April 15, '84	6
Maury.....	Lancaster, John.....	colored	Burglary.	June 14, '84	2 sentences.
Wayne.....	Lindsey, Eli.....	white	Larceny & Burglary.	Oct. 19, '84	3
Lincoln	Little, Bill.....	white	Larceny.	Nov. 11, '84	1
Morgan.....	Mathews, Wm.....	colored	Murder.	June 4, '76	15
Marshall	Murphy, Robt.....	colored	Housebreaking.	April 14, '76	13
Knox.....	Martin, Hurley.....	white	Housebreaking.	Feb. 5, '75	13
Madison.....	McNeil, Wm.....	colored	Arson.	Nov. 14, '76	15
Rhea.....	Martin, Robt.....	colored	Burglary.	June 23, '81	5
Moore	Maynor, Jos.....	white	Horsestealing.	Oct. 18, '81	7
Davidson.....	Matlock, Chas.....	colored	Larceny.	Jan. 20, '82	5
Rutherford....	Miller, Mike.....	colored	Larceny.	Aug. 16, '82	3
Lincoln	McCrary, Squire.....	colored	Larceny.	Nov. 14, '82	3

Davidson.....	Mathews, Fred..	colored	Larceny.	Nov.	25, '82	7
Shelby.....	Marshall, Robt.	colored	Larceny.	Feb.	17, '80	3
Davidson.....	Martin, Tom.....	white	Arson.	Feb.	23, '81	5
Hamilton.....	Massengill, Andrew.....	colored	Larceny.	June	22, '83	2
Davidson.....	Montgomery, Rose.....	colored	Larceny.	Oct.	31, '82	11
Davidson.....	McEwen, Tom.....	colored	Housebreaking.	July	26, '83	10
Davidson.....	McKnight, Sam.....	colored	Larceny.	Oct.	13, '83	5
Shelby.....	McCullough, Albert.....	colored	Larceny from Person	Oct.	23, '83	3
Haywood.....	Maclin, Tom.....	colored	Larceny.	Nov.	11, '83	3
Sumner.....	McGee, Peter.....	colored	Burglary and Lar'ny	Nov.	7, '83	3
Gibson.....	Mathis, Berry.....	colored	Attempt to Rape.	Dec.	5, '83	8
Shelby.....	Marshall, Richard.....	colored	Petit Larceny.	Jan.	12, '84	1
Shelby.....	Mitchell, Sol.....	colored	Ob. goods false pre's	Jan.	12, '84	3
Shelby.....	Muse, Major.....	colored	Petit Larceny.	Jan.	10, '84	1
Davidson.....	McMurray, Geo.....	colored	Larceny.	Jan.	23, '84	3
Shelby.....	McDonald, Chas.....	colored	Petit Larceny.	Jan.	22, '84	1
Maury.....	Miles, Wm.....	white	Larceny.	Feb.	15, '84	2
Shelby.....	Miller, Chas.....	white	Grand Larceny.	Feb.	20, '84	3
Hamilton.....	Mitchel, Henry.....	colored	Larceny.	Feb.	23, '84	3
Montgomery.	Miller, Scott.....	colored	Larceny.	Feb.	27, '84	1
Shelby.....	McLane, John.....	colored	Larceny.	June	5, '82	6
Davidson.....	Mathews, Sallie.....	colored	Assault to Murder.	Jan.	25, '83	3
Giles.....	Marks, Nat.....	colored	Petit Larceny.	April	9, '84	2
DeKalb.....	Magness, De.....	colored	Petit Larceny.	March	24, '84	3
Bedford.....	Mosley, Henry.....	colored	Petit Larceny.	April	15, '84	2
Shelby.....	Merton, Joe.....	colored	Burglary.	March	17, '84	5
Gibson.....	McDowell, Nick.....	colored	Larceny.	May	2, '84	3
Bradley.....	Mitchel, Anderson.....	colored	Larceny.	May	17, '84	1

2 sentences.

2 sentences.

NAMES OF PRISONERS AT TRACY CITY NOV. 30, 1884.

COUNTY.	NAME.	COLOR.	CRIME.	COM. OF SENTENCE.	YEARS
Shelby	Maby, John	white.	Larceny.	May 25, '84	3
Shelby	McCauley, Amos	colored	Larceny.	May 15, '84	3
Warren	Martin, Alf.	colored	Larceny.	June 3, '84	2
Hamilton	Manson, Alex	colored	Larceny.	June 20, '84	1½
Haywood	Morris, Peter	colored	Larceny.	July 4, '84	5
Fayette	Mason, Sandy	colored	Larceny.	July 2, '84	3
Maury	McLemore, Ben	colored	Larceny.	Oct. 19, '84	1
Carter	McIntosh, Carter	white	Grand Larceny.	March 18, '84	3
Madison	Motley, Ed	colored	Felonious Assault.	Nov. 3, '81	5
Wilson	Nippers, Rob	white	Horsestealing.	June 4, '81	6
Crockett	Nash, Frank	colored	Forgery.	June 10, '82	3
Davidson	Newton, Wm.	colored	Larceny.	Nov. 25, '82	7
Williamson	Nance, Ephraim	colored	Larceny.	March 29, '83	4
Davidson	Nye, Alonzo	colored	Assault to Rape.	Sept. 6, '83	10
Wilson	Nowby, Doc	colored	Larceny.	Sept. 29, '83	2
Gibson	Nedry, Jesse	colored	Invol. Manslaughter.	Jan. 2, '84	5
Shelby	Nunn, Frank	colored	Petit Larceny.	April 3, '84	1
Shelby	Neely, Jack	colored	Br. sto. prop. in Stat.	May 25, '84	5
Shelby	Nelson, Henry	white	Petit Larceny.	May 23, '84	1
Bedford	Oll, George	colored	Crime not given.	Dec. 27, '82	3
Gibson	O-born, Thos.	colored	Larceny.	March 29, '83	7
Maury	Offitt, Wm.	colored	Larceny.	Oct. 11, '83	2

2 sentences.

2 sentences.

3 sentences.

Dyer	Oliver, William	colored	Larceny.	Feb.	1, '84	1
Shelby	O'Connor, Charles	white	Larceny.	Jan.	17, '84	1
Marshall	Orr, Jake	colored	Malicious shooting.	Feb.	22, '84	3
Giles	Oliver, Marshall	colored	Larceny.	April	4, '84	4
Davidson	Pike, Joe	white	Larceny.	June	16, '81	20 4 sentences.
Shelby	Payne, Phil	colored	Murder.	Aug.	9, '76	20
Shelby	Partee, Ansel	colored	Housebreaking.	May	11, '76	15
Morgan	Page, Robert	colored	Murder.	Nov.	4, '79	15
Davidson	Putnam, Jno.	colored	Housebreaking.	Feb.	28, '83	11
Jackson	Pippin, Harvey	white	Robbery.	Sept.	23, '83	10
Davidson	Patton, Ed	colored	Housebreaking.	Oct.	30, '82	5
Wilson	Payne, Jim	colored	Housebreaking.	Jan.	27, '83	3
Gibson	Perry, J. G.	white	Horsestealing.	Dec.	5, '83	3
Fayette	Patterson, Dan.	colored	Lar. & rec. sto. goods.	March	5, '84	1
Maury	Porter, Chas.	colored	Housebr'k'g & Lar.	March	5, '84	3
Montgomery	Pardue, John	colored	Housebr'k'g & Fel.	Feb.	27, '84	3
Bedford	Peppers, Pat	colored	Assault to Murder.	April	15, '84	1
Gibson	Perry, Frank	colored	Larceny.	May	2, '84	2
Gibson	Pruett, Wm.	white	Larceny.	May	2, '84	1
Shelby	Parker, Howard	colored	Attempt to Murder.	May	25, '84	5
Fayette	Polk, Oscar	white	Housebreaking.	July	19, '79	10
Shelby	Payne, Charlie C.	colored	Larceny.	July	19, '81	6 2 sentences.
Shelby	Payne, Riley	colored	Larceny.	March	11, '83	4
Maury	Porter, John	colored	Attempt to Murder.	July	1, '77	11 1/2
Shelby	Pitman, W. C.	white	Mulestealing.	May	22, '74	10
Lincoln	Russell, John	colored	Forgery.	July	19, '82	3
Bedford	Reedy, Henry	colored	Larceny.	Aug.	18, '82	5 2 sentences.
Hamblen	Riley, Pres	colored	Murder.	Dec.	26, '70	20

NAMES OF PRISONERS AT TRACY CITY NOV. 30, 1884.

COUNTY.	NAME.	COLOR.	CRIME.	COM. OF SENTENCE.	YEARS.
Putnam	Romans, Jerry	white	Larceny.	June 12, '79	8½
Davidson	Redd, Abe.	colored	Burglary.	Oct. 24, '79	15
Shelby	Rice, Robt	colored	Assault to Murder.	March 27, '81	5
Maury	Robinson, Geo.	colored	Housebreaking.	Oct. 21, '82	3
Haywood	Richardson, Ben.	colored	Felonious Assault.	Nov. 10, '82	5
Davidson	Raines, Henderson	colored	Larceny.	Nov. 9, '82	4
Bedford	Rankin, Willis	colored	Larceny.	Dec. 27, '82	3
Bedford	Roberson, Nan.	colored	Arson and Larceny.	April 19, '83	3 2 sentences.
Shelby	Rodgers, Henry	colored	Housebreaking.	March 26, '81	5
Haywood	Reed, Douglass	colored	Larceny.	Nov. 10, '82	3
Hamilton	Reddin, John	colored	Involunt'y Mansl'tr.	June 22, '83	3½
Tipton	Richardson, Dick	colored	Larceny.	Sept. 22, '83	3
Davidson	Rucker, Archie	colored	Larceny.	Oct. 13, '83	5
Rhea	Ross, Charles	colored	Larceny.	Nov. 13, '83	5
Shelby	Reaves, Anderson	colored	Grand Larceny.	Oct. 31, '83	3
Davidson	Rines, Jimmie	colored	Larceny from Person.	Nov. 27, '83	3
Obion	Riley, Tobe	colored	Larceny.	Dec. 6, '83	2 2 sentences.
Obion	Robertson, Sale	white	Housebr'g and Lar.	Dec. 6, '83	6 2 sentences.
Shelby	Reynolds, George	white	Petit Larceny.	Jan. 8, '84	1
Rutherford ...	Randal, Lasky	colored	Petit Larceny.	April 18, '84	1
Shelby	Richardson, James	colored	Larceny.	April 15, '84	3
Hamilton	Roller, Joe	white	Larceny.	June 20, '84	3

Fayette.....	Richardson, Jim.....	colored	Larceny	July	10, '79	10
Shelby... ..	Smith, Sam.....	colored	Housebr'g & Larceny	Dec.	22, '79	7
Shelby... ..	Sanders, Allen.....	colored	Grand Larceny.	June	24, '81	5
Marion	Strickland, Wm.....	colored	Grand Larceny.	July	13 '82	3
Cannon.....	Stewart, Bethel.....	colored	Housebreaking.	Oct.	11, '75	14
Bradley	Sheridan, Phil.....	colored	Burglary.	Sept.	7, '81	5
Shelby... ..	Smith, John.....	colored	Housebr'g & Larceny	Sept.	24, '81	8 2 sentences.
Maury... ..	Southall, James.....	colored	Housebr'g & Larceny	June	9, '81	5
Warren.....	Stone, James.....	colored	Arson and Larceny.	Sept.	27, '82	4 2 sentences.
Maury	Smith, Roy.....	colored	Larceny.	Oct.	21, '82	3
Davidson.....	Swain, Bright.....	colored	Grand Larceny.	Nov.	26, '82	7
Davidson.....	Stevens, Wm.....	colored	Grand Larceny.	Nov.	29, '82	4
Franklin	Sharp, Tom.....	colored	Grand Larceny.	Nov.	29, '82	4
Hamblen.....	Smart, James.....	white	Grand Larceny.	August 18, '83	3	2 sentences.
Davidson.....	Sullivan, John.....	colored	Grand Larceny.	August 11, '83	6	
Davidson.....	Smith, Wm.....	colored	Grand Larceny.	Nov.	19, '83	5
Shelby... ..	Simpson, Wm.....	colored	Grand Larceny.	Oct.	27, '83	3
Shelby	Smith, Joe.....	colored	Grand Larceny.	Jan.	9, '84	4
Davidson.....	Stull, Solomon.....	colored	Malicious Cutting.	Jan.	22, '84	2
Gibson.....	Shaw, Alex.....	colored	Larceny.	March	5, '84	3
Giles.	Smith, Alex.....	colored	Arson.	Sept.	2, '82	8
Bedford	Stewart, George.....	colored	Larceny.	April	4, '84	2
Shelby... ..	Scott, Neal.....	colored	Larceny.	April	15, '84	1
Blount... ..	Suap, E. C.....	colored	Lar. from Person.	April	9, '84	5
Lauderdale ...	Stokes, George.....	colored	Incest.	June	11, '84	2
Hamilton	Smith, Wm.....	colored	Housebr'k'g & Lar.	June	13, '84	2
Davidson.....	Swansen, John H.....	colored	Larceny.	June	20, '84	2
Davidson.....	Sheppard, Babe.....	colored	Burglary.	June	23, '84	5
Davidson.....		colored	Larceny.	June	2, '84	6

NAMES OF PRISONERS AT TRACY CITY NOV. 30, 1884.

COUNTY.	NAME.	COLOR.	CRIME.	COM. OF SENTENCE.	YEARS.
Shelby.....	Stewart, Gus.....	colored	Grand Larceny.	Sept. 26, '84	3
Shelby	Taylor, Amanda.....	colored	Larceny.	March 29, '81	16
Shelby	Titus, Green.....	colored	Larceny.	July 15, '82	3
Madison.....	Thompson, George.....	colored	Larceny.	June 15, '82	5
Scott	Thornton, Beverly.....	colored	Barn burning.	Dec. 3, '79	10
Davidson.....	Townsend, John.....	colored	Larceny.	March 7, '81	5
Lincoln.. ..	Tigg, Robt.....	colored	Assault to Kill.	March 23, '82	5
Davidson.....	Taylor, Ed.	colored	Larceny.	Nov. 16, '82	3
Davidson... ..	Tiller, W.....	colored	Larceny.	Nov. 25, '82	7
Coffee.	Turner, Albert.....	colored	Larceny.	May 9, '83	2
Tipton.	Thomas, Lizzie.....	colored	Petit Larceny.	Sept. 22, '83	3
Shelby... ..	Thompson, Wm.....	colored	Petit Larceny.	Sept. 20, '84	3
Hamilton....	Thomas, John.....	colored	Larceny.	Feb. 23, '84	6
Madison	Thomas, John.....	colored	Felonious Assault.	Feb. 23, '84	1
Davidson.....	Thompson, Burt.....	colored	Larceny.	March 5, '84	2
Shelby... ..	Taylor, Frank.....	white	Larceny.	March 18, '84	1
Shelby... ..	Taylor, John.....	colored	Petit Larceny.	April 4, '84	1
Davidson.....	Thurman, Robt.....	white	Petit Larceny.	April 25, '84	1
Montgomery..	True, Lewis.....	colored	Assault to Kill.	May 28, '84	3
Maury	Thomas, Will.....	colored	Petit Larceny.	June 7, '84	2
Davidson.....	Thomason, John.....	colored	Petit Larceny.	June 14, '84	1
Davidson.....	Thompson, Ellen.....	colored	Petit Larceny.	June 20, '84	5
				June 2, '84.	1

Claborne.....	Thomas, Mack.....	white	Manslaughter.	July	7, '84	3
Knox.....	Teppens, Joe.....	colored	Arson.	Feb.	10, '84	6
Robertson.....	Wilson, Sam.....	white	Larceny.	Oct.	11, '81	8
Davidson.....	Walker, Ben.....	colored	Burgl'y and Larceny.	Feb.	29, '76	15
Shelby.....	Wheeler, Robt.....	colored	Murder.	May	11, '76	20
Shelby & Tip.	Wilson, Robt.....	colored	Housebreaking.	March	23, '78	14
Rutherford....	Williams, John.....	colored	Housebreaking.	Dec.	12, '78	2 sentences.
Madison.....	Woodfolk, Wm.....	colored	Arson.	March	14, '80	6
James.	Wolf, R. K.....	colored	Arson.	Sept.	26, '82	10
Williamson ..	Warren, Sam.....	white	Perjury.	Sept.	26, '82	4
Davidson.....	Weakly, Hillory.....	white	Forgery.	March	29, '83	3
Lincoln	Wakefield, Rich.....	colored	Grand Larceny.	March	7, '81	13
Bedford.....	Warren, Jim.....	white	Housebreaking.	July	16, '83	3
Shelby.....	Williams, Harris.....	white	Murder.	Aug.	24, '83	3
Tipton.....	Williamson, Jack.....	colored	Robbery.	Sept.	20, '81	10
Shelby.....	Williams, Harry.....	colored	Larceny.	Sept.	22, '83	3
Shelby.....	Washington, Florence.....	colored	Larceny.	Oct.	23, '83	6
Williamson ..	Walker, Felix.....	colored	Malicious Cutting.	Nov.	6, '83	2 sentences.
Franklin	Wright, Wm.....	colored	Burglary.	Nov.	30, '83	5
Shelby.....	Wright, Anthony.....	colored	Receiving sto. goods.	Dec.	11, '83	3
Dyer	Wallace, H. L.....	colored	Grand Larceny.	Dec.	24, '83	3
Dyer	White, Nat.....	white	Larceny.	Feb.	1, '84	3
Shelby	Williams, Pete.....	colored	Larceny.	Feb.	1, '84	1
Lauderdale....	Wood, Grant.....	colored	Larceny from person.	Feb.	2, '84	5
Maury	Williams, John.....	colored	Housebr'g. & Lar.	Feb.	14, '84	3
Shelby	Williams, Alex.....	colored	Larceny.	Feb.	15, '84	1
Madison.....	Williams, Henry.....	colored	Fraudulent br. of Tr.	Feb.	20, '84	1
Shelby	Wheeler, John.....	colored	Petit Larceny.	March	5, '84	1
		colored	Burg. and Larceny.	March	1, '84	5

NAMES OF PRISONERS AT TRACY CITY, NOV. 30, 1884.

COUNTY.	NAME.	COLOR.	CRIME.	COM. OF SENTENCE.	YEARS.
Haywood	Watson, Henry.....	colored	Larceny.	March 13, '84	2
Obion.....	Wilmoth, John.....	white	Grand Larceny.	March 29, '83	3
Chester.....	Willoughby, Bill.....	colored	Manslaughter.	Jan. 24, '83	3
Franklin	Wales, Diemer.....	colored	Horsestealing.	March 27, '84	6
Davidson	Walton, William.....	colored	Larceny.	March 18, '84	4
Bedford.	Wells, Jim.....	colored	Larceny.	April 15, '84	1
Rutherford....	Wilson, Pink.....	colored	Larceny.	April 18, '84	3
Robertson	Woodward, Warren.....	colored	Murder.	Oct. 16, '80	13
Shelby.	Webster, John H.....	white	Housebreaking.	June 30, '84	10
Maury	Whittaker, Alf.....	colored	Larceny.	Oct. 19, '84	3
Maury	Woods, Prince.....	colored	Larceny.	Oct. 19, '84	1
Shelby	Williams, Harry.....	colored	Horsestealing.	April 13, '76	10
Shelby	White, Albert.....	colored	Housebr'k'g & Lar.	Oct. 5, '81	3
Shelby	Williams, John.....	colored	Grand Larceny.	Oct. 27, '81	5
Lincoln	Yates, John.....	white	Larceny.	July 9, '84	3
					2 sentences.

NAMES OF PRISONERS AT INMAN, NOV. 30, 1884.

COUNTY.	NAME.	COLOR.	CRIME.	COM. OF SENTENCE.	YEARS
Tipton	Adams, John Quincy.....	colored	Lar. and Housebr'g.	May 23, '78	10
Davidson.....	Bearden.....	colored	Larceny & Robbery.	Feb. 22, '83	8½
Davidson.....	Brown, Dick.....	colored	Larceny.	July 2, '83	10
Davidson.....	Baker, Nelson.....	colored	Burglary.	Sept. 22, '82	7
Lincoln	Bonner, Sam... ..	colored	Larceny.	March 14, '84	1
Madison	Bond, George.....	colored	Larceny.	Oct. 29, '82	3
Hamilton	Burnett, Virgil.....	colored	Larceny.	Nov. 29, '81	5
Davidson.....	Bell, John.....	colored	Larceny.	Jan. 23, '84	9
Shelby	Bolton, Roscoe.....	colored	Assault to Murder.	Jan. 29, '84	2
Hardeman.....	Black, Lee.....	white	Larceny.	March 27, '84	2
Davidson.....	Branch, Cad... ..	white	Larceny in 5 cases.	June 6, '81	9
Davidson.....	Bledsoe, Jno... ..	colored	Larceny.	July 23, '84	2
Hardeman.....	Berry, Henry.....	colored	Larceny.	Aug. 4, '84	1
Rutherford...	Beard, Walter.....	white	Larceny.	Aug. 28, '84	3
Shelby	Boston, Dick.....	colored	Malicious Cutting.	Nov. 15, '84	1
Davidson.....	Curry, Anthony.....	colored	False Pretense.	May 29, '83	3
Giles.....	Chairs, Dave.....	colored	Arson.	May 9, '80	6
Giles.....	Coats, Wm.....	white	Attempt to Poison.	March 4, '82	10
Hamilton	Coleman, Wm	colored	Larceny.	Oct. 18, '83	3
Haywood.....	Cole, Frank.....	colored	Larceny.	March 21, '83	3
McNairy	Campbell, Jim.....	colored	Larceny.	Jan. 12, '83	3
Hardeman. ...	Campbell, Harry.....	colored	Larceny.	March 27, '84	1

Williamson ..	Carter, Dick.	white	Horsestealing.	Nov.	30, '83	3
Bedford.....	Cross, George.....	white	Horsestealing.	Aug.	16, '84	6
Shelby	Cox, Albert.	colored	Robbery.	Aug.	20, '84	5
Davidson.....	Cooper, Eph	colored	Larceny.	Nov.	12, '84	1
Hardeman.....	Develin, Bill.....	colored	Housebrk'g Lar.	Aug.	1, '83	8
Lincoln	Davis, Wm.....	colored	Larceny.	March	13, '80	5
Trousdale	Dillard, Reuben.....	colored	Grand Larceny.	May	4, '82	6
Stewart.....	Dudley, Wes.....	colored	Larceny & Burgl'ry.	Aug.	15, '82	4
Shelby	Davis, Bill	colored	Murder.	Dec.	4, '75	20
Davidson.....	Dismukes, Crib.....	colored	Larceny.	March	25, '84	1
Lincoln.....	DeGraffenreid, Wm.....	colored	Larceny.	March	19, '84	1
Davidson.....	Dunlap, Henry	colored	Robbery.	June	23, '84	5
Marion	Dale, Jim.....	white	Larceny and Perjury.	Aug.	4, '84	4
Shelby	Evans, Frank.....	colored	Assault to Murder.	July	7, '83	3
Madison	Ellison, Thos.....	colored	Burg. and Larceny.	June	23, '83	4
Giles.....	Eddins, Sterling.....	colored	Lar. & Houseb'k'g.	Aug.	1, '83	3
Marion	Edmondson, Lewis.....	white	Lar. & Houseb'k'g.	March	27, '84	3
Roane	Forester, D. B	white	Larceny.	Aug.	15, '84	2½
Hamilton.....	Flippin, Joshua.....	colored	Manslaughter.	Oct.	22, '84	2
Shelby	Ferrill, Henry	colored	Malicious Cutting.	Nov.	1, '84	1
Shelby.....	Finn, James.....	white	Larceny.	Nov.	7, '84	1
Rutherford....	Gilchrist, Bob.....	colored	Housebr'king & Lar.	Aug.	28, '84	3
Davidson.....	Gooch, Sue.....	colored	Housebr'king & Lar.	Feb.	8, '82	5
Jackson.....	Givens, Jim.....	white	Murder.	May	22, '83	5
Madison	Gaulman, Kent.....	colored	Larceny.	March	3, '83	2
Montgomery ..	Griffey, Nelson	colored	Larceny.	Dec.	7, '83	2
Madison	Gilmore, Chas.....	colored	Larceny & Burglary.	Nov.	9, '84	7
Madison	Griffin, John.....	colored	Petit Larceny.	Nov.	9, '84	1

NAMES OF PRISONERS AT INMAN, NOV. 30, 1884.

COUNTY.	NAME.	COLOR.	CRIME.	COM. OF SENTENCE.	YEARS.
Haywood.....	Hawkins, Lewis.....	colored	Felonious Assault.	Nov. 10, '84	2
Marshall	Haley, Tom.....	colored	Assault to Murder.	Oct. 23, '84	1½
Madison.....	Harris, George.....	colored	Petit Larceny.	Nov. 9, '84	7
Madison.....	Hayney, John.....	colored	Pet. and Gr. Larceny	Nov. 9, '84	8
Madison.....	Hayley, Lewis.....	colored	Petit Larceny.	Nov. 9, '84	2
Cueatham.....	Humphries, John.....	colored	Larceny.	Oct. 21, '84	1
Hamilton.. ...	Halloway, Isaac.....	colored	Petit Larceny.	Oct. 22, '84	2
Rutherford ...	Haliburten, Dennis.....	colored	Assault to Murder.	Aug. 28, '84	4
Rutherford ...	Hodge, George.....	colored	Larceny.	Aug. 28, '84	3 sentences.
Davidson.....	Huckelbury, Pink.....	colored	Larceny.	Feb. 16, '82	1
Hardeman.....	Hogue, George.....	white	Attempt to Murder.	Aug. 1, '83	6
Lake.....	Henderson, Alfred.....	colored	Grand Larceny.	Aug. 18, '82	2
Fayette.....	Hopson, Dan.....	colored	Housebr. & Larceny.	Nov. 17, '79	3
Henry	Harris, J. R.....	white	Robbery.	May 25, '81	9
Maury	Hagan, Jake.....	colored	Crime not given.	June 16, '82	8
Shelby	Hall, W. L.....	white	False Pretense.	Oct. 6, '82	3
Madison.....	Hendricks, Tom.....	colored	Larceny.	June 23, '83	5
Shelby... ..	Henderson, Geo.....	colored	Arson.	May 19, '83	3
Dyer	Howell, George.....	white	Housebreaking.	Sept. 22, '83	5
Jackson	Holliman, William.....	white	Housebreaking.	Sept. 19, '83	3
Davidson.....	Harris, John.....	colored	Larceny.	March 26, '84	1½
Polk.....	Henley, Cull.....	white	Larceny.	May 16, '82	5

Lincoln.....	Higdon, Bud.....	white	Larceny.	March 7, '84	1
Shelby.....	Hughes, Alex.	colored	Grand Larceny	March 25, '84	8
Haywood	Halloway, Smith.....	colored	Larceny.	Nov. 10, '84	1
Davidson.....	Johnson, Bond.....	colored	Larceny.	Jan. 30, '83	3
Shelby.....	Jones, George.....	colored	Larceny.	June 20, '83	3
Davidson.....	Johnson, John W.....	colored	Larceny.	Sept. 22, '80	27
Lauderdale ..	Johnson, George..	colored	Murder in 2d degree.	Feb. 14, '84	10
Lincoln	Jones, Andrew.....	white	Lar. and Housebr'g	March 4, '84	3
Hardeman.....	Jenkins, Frank.....	colored	Grand Larceny	March 27, '84	6
Hardeman.....	Jones, Nat.....	colored	Petit Larceny.	March 27, '84	1
Madison.....	Jones, Dudley.....	white	Grand Larceny	July 11, '84	8
Bedford.....	Johns, Stetson.....	colored	Horsestealing.	Aug. 16, '84	3
Shelby.....	Johnson, E. J.....	colored	Petit Larceny.	Jan. 9, '84	1
Hamilton.....	Jackson, Henry.....	colored	Petit Larceny.	Oct. 22, '84	3
Hard man.....	Knight, James...	colored	Larceny.	April 1, '83	3
Giles.....	Kerr, Ed.....	colored	Larceny.	July 31, '83	3
Hamilton.....	Knox, Sam.....	colored	Larceny.	Oct. 18, '83	3
Hardeman.....	King, Zack.....	colored	Larceny.	Aug. 4, '84	1
Shelby	Kelly, Tom.....	white	Larceny.	Sept. 10, '84	1
Haywood.....	Lowery, Jesse.....	colored	Larceny.	July 1, '83	5
Hamilton.....	Lee, Wm.....	white	Larceny from person.	Oct. 18, '83	3
Shelby	Langster, Odell.....	colored	Housebreaking.	Sept. 19, '83	3
Gibson	Lanom, Ed.....	colored	Forgery.	Aug. 9, '84	3
Hamilton.	Lawrence, D. H.....	white	Forgery.	Oct. 22, '84	3
Hamilton.....	Lillard, James.....	colored	Larceny.	Oct. 22, '84	6
Haywood	Morris, Ed.....	colored	Forgery.	July 1, '82	3
Putnam	Maynard, W.....	white	Larceny.	Feb. 26, '83	3
Davidson.....	McGavock, Joe.....	colored	Larceny.	June 18, '83	4

NAMES OF PRISONERS AT INMAN, NOV. 30, 1884.

COUNTY.	NAME.	COLOR.	CRIME.	COM. OF SENTENCE.	YEARS.
Haywood.....	Hawkins, Lewis.....	colored	Felonious Assault.	Nov. 10, '84	2
Marshall	Haley, Tom.....	colored	Assault to Murder.	Oct. 23, '84	1 1/2
Madison.....	Harris, George.....	colored	Petit Larceny.	Nov. 9, '84	7
Madison.....	Hayney, John.....	colored	Pet. and Gr. Larceny	Nov. 9, '84	8
Madison.....	Hayley, Lewis.....	colored	Petit Larceny.	Nov. 9, '84	2
Cheatham.....	Humphries, John.....	colored	Larceny.	Oct. 21, '84	1
Hamilton.. ...	Halloway, Isaac.....	colored	Petit Larceny.	Oct. 22, '84	2
Rutherford	Haliburten, Dennis.....	colored	Assault to Murder.	Aug. 28, '84	4
Rutherford	Hodge, George.....	colored	Larceny.	Aug. 28, '84	3 sentences.
Davidson.....	Huckelbury, Pink.....	colored	Larceny.	Feb. 16, '82	1
Hardeman.....	Hogue, George.....	white	Attempt to Murder.	Aug. 1, '83	6
Lake.....	Henderson, Alfred.....	colored	Grand Larceny.	Aug. 18, '82	2
Fayette.....	Hopson, Dan.....	colored	Housebr. & Larceny.	Nov. 17, '79	3
Henry	Harris, J. R.....	white	Robbery.	May 25, '81	9
Maury	Hagan, Jake.....	colored	Crime not given.	June 16, '82	8
Shelby	Hall, W. L.....	white	False Pretense.	Oct. 6, '82	3
Madison.....	Hendricks, Tom.....	colored	Larceny.	June 23, '83	5
Shelby... ..	Henderson, Geo.....	colored	Arson.	May 19, '83	3
Dyer	Howell, George.....	white	Housebreaking.	Sept. 22, '83	5
Jackson	Holliman, William.....	white	Housebreaking.	Sept. 19, '83	3
Davidson.....	Harris, John.....	colored	Larceny.	March 26, '84	1 1/2
Polk.....	Henley, Cull.....	white	Larceny.	May 16, '82	5

Lincoln.....	Higdon, Bud.....	white	Larceny.	March	7, '84	1
Shelby.....	Hughes, Alex.	colored	Grand Larceny	March	25, '84	8
Haywood	Halloway, Smith.....	colored	Larceny.	Nov.	10, '84	1
Davidson.....	Johnson, Bond.....	colored	Larceny.	Jan.	30, '83	3
Shelby.....	Jones, George.....	colored	Larceny.	June	20, '83	3
Davidson.....	Johnson, John W.....	colored	Larceny.	Sept.	22, '80	27
Lauderdale ..	Johnson, George...	colored	Murder in 2d degree.	Feb.	14, '84	10
Lincoln	Jones, Andrew.....	white	Lar. and Housebr'g	March	4, '84	3
Hardeman.....	Jenkins, Frank.....	colored	Grand Larceny	March	27, '84	6
Hardeman.....	Jones, Nat.....	colored	Petit Larceny.	March	27, '84	1
Madison.....	Jones, Dudley.....	white	Grand Larceny	July	11, '84	8
Bedford.....	Johns, Stetson.....	colored	Horsestealing.	Aug.	16, '84	3
Shelby.....	Johnson, E. J.....	colored	Petit Larceny.	Jan.	9, '84	1
Hamilton.....	Jackson, Henry.....	colored	Petit Larceny.	Oct.	22, '84	3
Hard man.....	Knight, James...	colored	Larceny.	April	1, '83	3
Giles.....	Kerr, Ed.....	colored	Larceny.	July	31, '83	3
Hamilton.....	Knox, Sam.....	colored	Larceny.	Oct.	18, '83	3
Hardeman.....	King, Zack.....	colored	Larceny.	Aug.	4, '84	1
Shelby	Kelly, Tom.....	white	Larceny.	Sept.	10, '84	1
Haywood.....	Lowery, Jesse.....	colored	Larceny.	July	1, '83	5
Hamilton.....	Lee, Wm.....	white	Larceny from person.	Oct.	18, '83	3
Shelby	Langster, Odell.....	colored	Housebreaking.	Sept.	19, '83	3
Gibson	Lanom, Ed.....	colored	Forgery.	Aug.	9, '84	3
Hamilton.....	Lawrence, D. H.....	white	Forgery.	Oct.	22, '84	3
Hamilton.....	Lillard, James.....	colored	Larceny.	Oct.	22, '84	6
Haywood.....	Morris, Ed.....	colored	Forgery.	July	1, '82	3
Putnam	Maynard, W.....	white	Larceny.	Feb.	26, '83	3
Davidson.....	McGavock, Joe.....	colored	Larceny.	June	18, '83	4

NAMES OF PRISONERS AT TRACY CITY, NOV. 30, 1884.

COUNTY.	NAME.	COLOR.	CRIME.	COM. OF SENTENCE.	YEARS.
Shelby...	Maney, Daniel.....	colored	Larceny.	March 11, '83	3
Hamilton..	Murphy, Albert.....	colored	Larceny.	June 22, '83	3
Lincoln.....	Moore, Bose.....	colored	Larceny.	March 4, '84	1
Davidson.....	Miles, Dan	colored	Larceny.	March 25, '84	1
Hardeman....	Miller, Horace.....	colored	Petit Larceny.	March 27, '84	1
Hardeman....	McKinnie, John H.	colored	Petit Larceny.	March 27, '84	1
Hardeman....	McKissick, Lewis	colored	Petit Larceny.	March 27, '84	3
Rhea.....	McDaniel, S.....	colored	Grand & Petit Lar.	July 15, '84	5
Madison	Meriweather, Rob....	colored	Arson.	July 11, '84	2
Chester	McLellan, Chas	colored	Larceny.	Aug. 11, '84	1
Franklin	Miles, Wm.....	colored	Larceny.	Aug. 6, '84	1
James	Moon, Jerry	colored	Begs'g wife's sister with child	Sept. 3, '84	2
Jefferson	Miller, Henry	white	Grand Larceny.	Aug. 7, '78	9
Hamilton	Mosley, Houston	colored	Larceny.	Oct. 22, '84	5
Marshall	McLean, Tom.....	colored	B'k'g open bus. hous.	Oct. 23, '84	3
Davidson	McBrooks, James.....	white	Lar. and Housebr'g.	Oct. 23, '84	3
Madison	McCorry, Rome.....	colored	Larceny.	Nov. 9, '84	4
Shelby	Miller, John.....	colored	Larceny.	Nov. 1, '84	1
Fayette.....	Mask, Armstead.....	colored	Invol. Manslaughter.	Nov. 14, '84	2½
Madison	Nelson, Jim	colored	Housebreaking.	Nov. 14, '76	15
Maury	Neely, Riley.. ..	colored	Horsestealing.	Oct. 18, '80	5½
Marshall.....	Oneal, Ad.....	colored	Burglary.	March 28, '81	8

Hardeman.....	Oakes, Wm.....	white	Voluntary Mansl'r.	Aug.	1, '83	2½
Hardeman.....	Oswald, James.....	colored	Petit Larceny.	Aug.	1, '83	1½
Davidson.....	Parker, Will, alias Henry.....	colored	Burglary and larceny	Jan.	18, '83	4
Giles..	Pendergrass, Rob.....	white	Horsestealing.	Dec.	24, '81	4
Anderson	Prater, Wm.....	colored	Housebrk'g & Lar.	July	11, '82	3
Shelby	Pitts, John.....	colored	Grand Larceny.	June	20, '83	3
Knox.....	Porter, Newton.....	colored	Housebrk'g & Lar.	Aug.	9, '84	3
Cheatham.....	Pearson, Peter.....	colored	Larceny.	Oct.	21, '84	1
Bedford.....	Revis, Lafayette.....	white	Housebrk'g & Lar.	Dec.	19, '78	15
Shelby.....	Roseborough, Lee.....	colored	Attempt to Murder.	July	20, '83	2
Crockett.....	Robinson, Risdom	white	Housebrk'g and Lar.	June	10, '82	3
Madison	Robinson, Felix.....	white	Horsteal'g & Arson.	Nov.	10, '80	10
Shelby.....	Russell, Andy.....	colored	Larceny.	May	5, '83	3
Hardeman.....	Rodgers, Wm.....	colored	Petit Larceny.	March	27, '84	1½
Chester.....	Rodgers, Alf.....	colored	Burglary.	Aug.	11, '84	10
Roane	Reagan, Ben.....	white	Grand Larceny.	Aug.	14, '84	4½
Davidson.....	Rodgers, John.....	colored	Larceny.	Nov.	7, '84	2
Madison	Springfield, Green.....	colored	Larceny.	March	3, '83	2
Davidson.....	Smith, Frank.....	colored	Larceny.	Dec.	1, '82	5
Williamson	Soruggs, Andy.....	colored	Burglary & Larceny.	July	23, '83	8
Hamblen	Smith, James H.....	white	Forgery.	Dec.	8, '82	6
Davidson.....	Smith, Phil.....	colored	Lar. from Person.	Jan.	17, '83	4
Wilson.....	Seay, Marcus.....	colored	Horsestealing.	May	29, '82	5
Davidson.....	Stephenson, Sophia.....	colored	Larceny.	July	11, '83	5
Bedford.	Stewart, Tom.....	colored	Voluntary Mansl'r.	Dec.	27, '82	5
Davidson.....	Scruggs, Charles.....	colored	Housebreaking.	Sept.	7, '83	3
Davidson.....	Sellers, Charles.....	colored	Buggery.	March	24, '84	5
Shelby.....	Simmonton, Geo.....	colored	Grand Larceny.	Jan.	27, '82	5

5—Prison.

NAMES OF PRISONERS AT INMAN, NOV. 30, 1884.

COUNTY.	NAME.	COLOR.	CRIME.	COM. OF SENTENCE.	YEARS.
Tipton	Small, Lee.....	colored	Malicious Stabbing.	Jan. 26, '84	2
Putnam	Sparks, Wm	white	Assault to Rape.	Feb. 23, '84	2
Shelby	Simms, August.....	white	Forgery.....	Sept. 10, '84	3
Davidson... ..	Scales, Joe.....	colored	Larceny.	Oct. 20, '84	2
Madison	Smith, John.....	colored	Larceny.	Nov. 9, '84	2
Madison	Shaw, Sam.....	colored	Felonious Assault....	Nov. 9, '84	1
Haywood	Tucker, Hannah.....	colored	Murder.	Nov. 10, '82	3
Haywood	Thomas, Henry.....	colored	Housebr'ng & Lar.	Nov. 5, '81	5
Haywood	Taylor, Scott.....	colored	Larceny.	March 13, '84	1
Madison	Thomas, Jim.....	colored	Petit Larceny.	July 11, '84	1
Fayette.. ..	Thomas, James.....	colored	Larceny.	Nov. 14, '84	2
Obion	Winnberry, John H.....	white	Larceny.	March 31, '82	5
Haywood	Walker, Bruce	colored	Larceny.	March 21, '83	3
Hardeman....	Washington, George.....	colored	Attempt to Murder.	Aug. 1, '83	2½
Haywood	Wells, Jim.....	colored	Bigamy.	July 1, '83	2
Shelby	Wilson, Bettie.....	colored	Malicious Cutting.	July 12, '83	3
Shelby	Wright, William.....	colored	Grand Larceny.	Oct. 13, '80	7
Shelby.... ..	Williams, Charles	colored	Petit Larceny.	April 9, '83	3
Shelby	Wice, Louis.....	white	Grand Larceny.	Feb. 20, '84	3
Lincoln.....	Woods, Clint.....	colored	Forgery.	July 14, '82	3
Shelby	White, George.....	colored	Petit Larceny.	Jan. 5, '84	1
Hardeman....	Wiseman, Lou.....	colored	Involuntary Mans'l'r.	Aug. 4, '84	1

Hamilton.....	Wilson, Lee.....	colored	Incest.	Oct.	22, '84	21
Davidson.....	Williams, Ed.....	colored	False Pretense.	Oct.	27, '84	3
Shelby.....	Wilson, James.....	white	Housebrk'g & Lar.	Nov.	10, '84	2
Henry	Ventress, Cuff.....	colored	Attempt to Murder.	June	20, '83	3
Davidson.....	Zackery, Joe.....	white	Larceny.	Jan.	24, '82	4

NAMES OF PRISONERS AT INMAN, NOV. 30, 1884.

COUNTY.	NAME.	COLOR.	CRIME.	COM. OF SENTENCE.	YEARS.
Tipton	Small, Lee.....	colored	Malicious Stabbing.	Jan. 26, '84	2
Putnam	Sparks, Wm	white	Assault to Rape.	Feb. 23, '84	2
Shelby	Simms, August.....	white	Forgery.....	Sept. 10, '84	3
Davidson... ..	Scales, Joe.....	colored	Larceny.	Oct. 20, '84	2
Madison	Smith, John.....	colored	Larceny.	Nov. 9, '84	2
Madison	Shaw, Sam.....	colored	Felonious Assault....	Nov. 9, '84	1
Haywood... ..	Tucker, Hannah.....	colored	Murder.	Nov. 10, '82	3
Haywood.....	Thomas, Henry.....	colored	Housebr'ng & Lar.	Nov. 5, '81	5
Haywood.....	Taylor, Scott.....	colored	Larceny.	March 13, '84	1
Madison.....	Thomas, Jim.....	colored	Petit Larceny.	July 11, '84	1
Fayette.. ..	Thomas, James.....	colored	Larceny.	Nov. 14, '84	2
Obion.....	Winnberry, John H.....	white	Larceny.	March 31, '82	5
Haywood.....	Walker, Bruce	colored	Larceny.	March 21, '83	3
Hardeman....	Washington, George.....	colored	Attempt to Murder.	Aug. 1, '83	2½
Haywood.....	Wells, Jim.....	colored	Bigamy.	July 1, '83	2
Shelby	Wilson, Bettie.....	colored	Malicious Cutting.	July 12, '83	3
Shelby	Wright, William.....	colored	Grand Larceny.	Oct. 13, '80	7
Shelby	Williams, Charles	colored	Petit Larceny.	April 9, '83	3
Shelby	Wice, Louis.....	white	Grand Larceny.	Feb. 20, '84	3
Lincoln.....	Woods, Clint.....	colored	Forgery.	July 14, '82	3
Shelby	White, George.....	colored	Petit Larceny.	Jan. 5, '84	1
Hardeman.	Wiseman, Lou.....	colored	Involuntary Mans'l'r.	Aug. 4, '84	1

Hamilton.....	Wilson, Lee.....	colored	Incest.	Oct.	22, '84	21
Davidson.....	Williams, Ed.....	colored	False Pretense.	Oct.	27, '84	3
Shelby.....	Wilson, James.....	white	Housebrk'g & Lar.	Nov.	10, '84	2
Henry	Ventress, Cuff.....	colored	Attempt to Murder.	June	20, '83	3
Davidson.....	Zackery, Joe.....	white	Larceny.	Jan.	24, '82	4

NAMES OF PRISONERS AT COAL CREEK, NOV. 30, 1884.

COUNTY.	NAME.	COLOR.	CRIME.	COM. OF SENTENCE.	YEARS.
Knox.....	Andrews, James T.....	white	Larceny.	Nov. 10, '81	8
Jefferson.....	Allen, James.....	colored	Rape.	Aug. 24, '83	10
Davidson.....	Burlison, Gaines.....	colored	Larceny.	June 13, '82	7
Tipton.....	Barney, James.....	colored	Horsestealing.	Sept. 23, '77	10
Sullivan.....	Barr, Wm.....	white	Murder.	April 11, '78	15
Roane.....	Blair, Charles.....	colored	Larceny.	Dec. 20, '80	7
Hawkins.....	Baldwin, Stephen.....	white	Larceny.	May 28, '81	7
Knox.....	Boyd, John.....	colored	Felonious Assault.	July 13, '82	5
Hancock.....	Bolin, Ed.....	white	Murder in 2d degree.	Oct. 9, '82	10
Knox.....	Brown, G. C.....	white	Perjury.	Nov. 8, '82	3
Claiborne.....	Burton, Calvin.....	white	Larceny.	March 14, '83	3
Sevier.....	Bryant, Charlotte.....	colored	Felonious Assault.	Nov. 23, '83	3
Hawkins.....	Bowen, John.....	colored	Involuntary Mans'ltr	Feb. 14, '84	3
Washington ..	Bowman, Peter.....	white	Robbery.	Nov. 19, '84	5
Washington ..	Bowman, David.....	white	Robbery.	Nov. 19, '84	5
Lauderdale....	Clay, George.....	colored	Lar. & rec. st'n g'ds	Oct. 4, '84	1
McNairy.....	Carroll, Lee.....	white	T'kng female for prost	Sept. 19, '84	10
Jefferson.....	Cleringer, Nancy.....	colored	Murder.	April 12, '81	5
Knox.....	Carter, Earl.....	colored	Robbery.	Feb. 20, '82	5
Greene.....	Chitwood, Boney.....	colored	Attempt to Rape.	Oct. 12, '82	21
Hamblen.....	Canter, Martin.....	white	Grand Larceny.	Aug. 9, '83	6
Knox.....	Carter, Daniel.....	colored	Perjury.	Oct. 10, '83	3

Hamblen.....	Canter, John.....	white	Larceny.	Dec.	7, '83	4
Campbell.....	Cox, George.....	white	Larceny.	July	23, '84	2
Shelby	Cartwright, Green.....	colored	Grand Larceny.	Aug.	20, '84	3
Knox.	Callahan, Owen.....	white	Larceny.	Sept.	24, '84	2½
Knox.	Clesge, Wm.....	colored	Larceny.	Sept.	24, '84	2
Hamblen.....	Campbell, J. C.....	white	Larceny.	Nov.	18, '84	3
Hamblen.....	Daniel, R. A.....	white	Forgery, 2 cases.	Aug.	8, '82	6
Knox.....	De Bruin, Henry.....	white	Housebreaking.	June	5, '83	3
Morgan	De Vault, John.....	white	Larceny.	July	10, '83	3
Roane	Dandy, Ch.....	colored	Larceny.	April	22, '84	1
Marion.....	Dale, Joseph.....	white	Larceny.	Nov.	19, '84	3
Tipton.....	Edio, Wm.....	colored	Horsestealing.	May	20, '82	7
Washington...	Emmerson, Ch.....	colored	Forgery.	Dec.	22, '82	3
London	Elderidge, Cuff.....	colored	Assault to Rape.	May	21, '82	6
Knox.....	Evans, A. H.....	white	Voluntary Manal'ter	Oct.	16, '82	5
Davidson.....	Ferris, Henry.....	colored	Larceny.	May	16, '82	4
Knox.....	Ferguson, Wm.....	white	Larceny.	Nov.	9, '81	5
Sullivan.....	Fugate, James.	colored	Arson.	April	11, '83	2
Hamblen... ..	Fry, James	white	Larceny.	Dec.	7, '83	4
Campbell.....	Flournoy, Charles.	colored	Larceny.	Nov.	23, '84	1
Davidson.....	Hill, Joe.....	colored	Larceny & Burglary.	Sept.	28, '77	10
Davidson.....	Hurst, Jordan.....	colored	Larceny & Burglary.	Sept.	21, '77	20
Washington ..	Hensley, W. W.....	white	Voluntary Manal'ter	April	27, '82	3½
Union	Hundley, Maynard.	white	Forgery.	Oct.	27, '82	3
Knox.....	Hall, Malinda.....	colored	Larceny.	June	5, '83	2
Knox.....	Henderson, Wm.....	colored	Larceny, 3 cases.	Oct.	3, '83	9
Knox.....	Henderson, Allen.....	colored	Larceny, 2 cases.	Oct.	2, '83	8
Sevier	Hawkins, James	white	Petit Larceny.	Nov.	22, '83	2

NAMES OF PRISONERS AT COAL CREEK, NOV. 30, 1884.

COUNTY.	NAME.	COLOR.	CRIME.	COM. OF SENTENCE.	YEARS.
Knox.....	Hale, Joe.....	colored	Petit Larceny.	Feb. 10, '84	3
Knox.....	Hunt, Rob.....	colored	Housebreaking.	Feb. 10, '84	3
Davidson....	Harris, George.....	colored	Larceny from Pers'n	Feb. 1, '81	5
Fayette.....	Halloway, Bill.....	colored	Incest.	Nov. 3, '81	5
Fayette.....	Hailey, Alex.....	colored	Breach of Trust.	March 16, '82	5
Madison	Hunter, Joe.....	colored	Larceny.	June 17, '82	4
Greene.....	Hill, Adam.....	white	Larceny.	Feb. 14, '84	3
Sevier	Henry, Wm.....	white	Larceny.	July 24, '84	1
Cumberland..	Hopper, John.....	white	Larceny.	Aug. 26, '84	2
Anderson....	Harris, Samuel.....	white	Larceny.	Nov. 11, '84	3
Jefferson....	Hopkins, Geo. T.....	white	Burglary.	Nov. 19, '84	3
Sullivan....	Harrington, Peter.....	white	Larceny.	Nov. 19, '84	5
Jefferson....	Hawkins, Charles.....	colored	Larceny.	Nov. 19, '84	2
Tipton	Green, Tannie.....	colored	Housebreaking.	May 22, '77	10
Knox.....	Gass, Lizzie.....	white	Misegeneration.	Sept. 17, '83	1½
Rhea.....	Garvin, Wm.	white	Not given.	Nov. 23, '83	7
Hamblen....	Gray, Phillip.....	white	Larceny.	Dec. 7, '83	2
Sevier	Garner, Eli.....	white	Larceny.	Nov. 20, '83	4
Tipton.....	Goodman, Henry.....	colored	Housebreaking.	Sept. 22, '84	5
Bedford.	Greer, Eph.....	colored	Larceny.	Aug. 16, '84	1
Campbell....	Gale, O. T.....	white	Housebreaking.	Nov. 5, '84	4
Unicoi	Guin, Andrew.....	white	Larceny.	Nov. 6, '84	1

Shelby	Goosby, Andrew.....	colored	Assault to Murder.	Oct. 15, '82	3
Jackson.	Gibson, Wash.....	colored	Horsestealing.	Sept. 25, '82	4
Knox.....	Jackson, J. J.....	colored	Forgery.	Oct. 11, '82	3
Greene.....	Jackson, Dixie.....	white	Larceny.	Feb. 21, '83	3
Knox.....	Jackson, Wm.....	colored	Larceny.	Feb. 10, '84	1
Knox.....	Johnson, Isiah.....	colored	Perjury.	June 6, '84	3
Grainger	Johnson, Brownlow.....	white	Burglary.	Aug. 28, '84	3
Lauderdale....	Johnson, Matt.....	colored	Lar. & rec'g stl'n g's	Oct. 4, '84	4
Lauderdale....	Jennings, Henry.....	colored	Larceny.	Oct. 4, '84	1
Shelby	Johnson, John.....	colored	Grand Larceny.	Sept. 27, '82	3
Crockett.....	Jackson, George.....	colored	Larceny.	Oct. 4, '84	2
Knox.....	Kincaid, Paul.....	colored	Larceny.	Oct. 18, '80	9
Knox.....	Kain, Jerry.....	colored	Felonious Assault.	Feb. 10, '84	4
Shelby.....	Kirkendale, Jim.....	colored	Larceny, 2 cases.	Sept. 10, '84	6
Franklin	Lowe, Alfred.....	colored	Grand Larceny.	March 22, '75	10
Greene.....	Luttrell, Robt. J.....	white	Felonious Assault.	Feb. 18, '82	5
Washington...	Laudermilk, Peter.....	white	Larceny.	April 17, '83	5
Knox.....	Levellyn, Joseph.....	colored	Larceny.	June 6, '84	2
Shelby	Ledbetter, George.....	colored	Malicious Cutting.	Sept. 26, '84	1
Carber	Mosley, Samuel.....	white	Robbery.	Nov. 19, '84	5
Washington ..	Moreland, Lewis.....	colored	False Pretense.	Nov. 19, '84	3
Greene.....	McHarris, Allen.....	white	Larceny.	Oct. 16, '84	2
Shelby..	Morris, Will.....	colored	Burglary & Larceny.	Dec. 2, '83	8
Knox.....	Moulden, Wm.....	colored	Larceny.	Sept. 24, '84	2
Knox.....	McHenry, James.....	colored	Larceny.	Sept. 24, '84	1
Johnson.....	McQuinn, Lafayette.....	colored	Murder in 2d degree.	Nov. 22, '78	18
Lake.....	McNeal, Ben.....	colored	Larceny.	Aug. 8, '82	3
Hamblen.....	McDaniel, Earnest.....	white	Larceny, 2 cases.	Aug. 11, '83	6

NAMES OF PRISONERS AT COAL CREEK, Nov. 30, 1884.

COUNTY.	NAME.	COLOR.	CRIME.	COM. OF SENTENCE.	YEARS.
Grainger.....	McCoy, Daniel.....	white	Not given.	Oct. 2, '83	3
Cumberland...	Music, Samuel.....	white	Voluntary Mansl'r.	Oct. 16, '83	3
Knox.....	Morefield, Frank.....	colored	Larceny.	Jan. 27, '83	3
Knox.....	Meredith, W. S.....	white	Larceny.	April 12, '83	2
Knox.....	Mason, W.....	colored	Larceny.	June 5, '83	3
Hawkins.....	Mabe, Rube.....	white	Larceny.	June 6, '84	3
Knox.....	McFarland, Andrew.....	colored	Larceny.	June 6, '84	8
Campbell.....	Nichols, John.....	colored	Larceny.	March 26, '83	3
Knox.....	Newton, Wm.....	colored	Murder.	Oct. 2, '83	2
Roane.....	Nave, John.....	white	False Pretense.	April 18, '84	1
Knox.....	Nelson, George.....	colored	Larceny.	Sept. 24, '84	1½
Hamilton.....	Orange, Henry.....	white	Larceny.	Oct. 16, '83	4
Cannon.....	Officer, Jeff.....	colored	Larc'y & Houseb'ng	June 20, '82	3
Shelby.....	Pratt, Henry.....	colored	Burg'y and Larceny.	Sept. 10, '84	15
Johnson.....	Phillip, Calvin.....	white	Murder 2d degree.	Nov. 25, '81	10
Knox.....	Patsy, James.....	colored	Larceny.	Jan. 31, '83	3
Marion.....	Pickett, Wash.....	colored	Assault to Rape.	Aug. 4, '84	2
Johnson.....	Pressnell, Alf.....	white	Murder 2d degree.	Nov. 21, '84	14
Johnson.....	Pressnell, John.....	white	Murder 2d degree.	Nov. 21, '84	14
Knox.....	Reed, John.....	colored	Larceny.	Sept. 24, '84	1½
Davidson.....	Sheeot, Nathan.....	colored	Burglary & Larceny.	April 1, '76	12
Davidson.....	Spence, Ned.....	colored	Burglary & Larceny.	Feb. 18, '82	10

sentence.

3 sentences.

Campbell.....	Seals, Johnson	colored	Burglary & Larceny.	March 26, '83	3
Scott..	Smith, Jerry.....	white	Felonious Assault.	Dec. 1, '83	5
Sullivan.....	Shipley, Hunt.....	colored	Larceny.	Dec. 8, '83	2
Washington ..	Stover, Sol.....	colored	Abduction.	Dec. 19, '83	10
Greene	Stafford, Hugh.....	white	Burglary.	Feb. 20, '84	4
Greene.....	Smith, William.....	white	Murder.	Feb. 21, '84	14
Tipton	Smith, John B.....	white	Larceny.	Sept. 22, '84	1
Shelby	Smith, Berry.....	colored	Grand Larceny.	Sept. 26, '84	3
Campbell.....	Temple, Daniel.....	colored	Housebr'g & Larceny	March 26, '83	3
Fentress	Tabor, Stanton.....	white	Housebr'g & Larceny	Dec. 4, '83	3
Roane.....	Taylor, Jack.....	white	Murder.	April, 17, '84	2
Shelby.....	Tucker, Anthony.....	colored	Grand Larceny.	Aug. 20, '84	3
Knox.....	Tolbut, Frank.....	colored	Larceny.	Sept. 24, '84	2
Bradley.....	Taylor, Sam.....	colored	Housebreaking.	Sept. 6, '84	2
Shelby.....	Thomas, John.....	colored	Forgery.	Sept. 26, '84	3
Shelby... ..	Thomas, Ben	colored	Petit Larceny.	Sept. 26, '84	1
Fentress	Vaughn, Ervin	white	Larceny.	July 31, '83	3
Hawkins	West, Frank.....	white	Larceny.	Jan. 31, '82	5
Gibson.....	Williams, Bill	colored	Larceny.	Aug. 2, '81	6
Knox.....	Weir, A. H.....	white	Forgery.	Sept. 20, '82	3
Anderson.....	Weaver, Louis.....	colored	Larceny.	Nov. 18, '82	4
Loudon.....	Williams, Wm.....	colored	Larceny.	Jan. 1, '81	5
Campbell.....	Wallace, Alex.....	white	Felonious Assault.	March 26, '83	3
Washington ..	Washington, Lunar.....	colored	Larc'y, sen'ce expires	April 30, '87	
Knox.....	Wilson, Ed.....	colored	Larceny.	June 5, '83	2
Shelby	Williams, J. W.....	colored	Larc'y, sen'ce expires	June 13, '90	
Scott..	West, Robert	white	Housebreaking.	Dec. 1, '83	3
Hamblen.....	Ward, W	colored	Rescue.	April 14, '84	1

NAMES OF PRISONERS AT COAL CREEK, Nov. 30, 1884.

(72)

COUNTY.	NAME.	COLOR.	CRIME.	COM. OF SENTENCE.	YEARS.
Granger.....	McCoy, Daniel.....	white	Not given.	Oct. 2, '83	3
Cumberland...	Musie, Samuel.....	white	Voluntary Mansl'r.	Oct. 16, '83	3
Knox....	Morefield, Frank.....	colored	Larceny.	Jan. 27, '83	3
Knox....	Meredith, W. S.....	white	Larceny.	April 12, '83	2
Knox....	Mason, W.....	colored	Larceny.	June 5, '83	3
Hawkins....	Mabe, Rube.....	white	Larceny.	June 6, '84	3
Knox....	McFarland, Andrew.....	colored	Larceny.	June 6, '84	8
Campbell.....	Nichols, John.....	colored	Larceny.	March 26, '83	3
Knox....	Newton, Wm.....	colored	Murder.	Oct. 2, '83	2
Roane....	Nave, John.....	white	False Pretense.	April 18, '84	1
Knox....	Nelson, George.....	colored	Larceny.	Sept. 24, '84	1½
Hamilton.....	Orange, Henry.....	white	Larceny.	Oct. 16, '83	4
Cannon....	Officer, Jeff.....	colored	Larc'y & Houseb'ng	June 20, '82	3
Shelby.....	Pratt, Henry.....	colored	Burg'y and Larceny.	Sept. 10, '84	15
Johnson.....	Phillip, Calvin.....	white	Murder 2d degree.	Nov. 25, '81	10
Knox....	Patsy, James.....	colored	Larceny.	Jan. 31, '83	3
Marion.....	Pickett, Wash.....	colored	Assault to Rape.	Aug. 4, '84	2
Johnson.....	Pressnell, Alf.....	white	Murder 2d degree.	Nov. 21, '84	14
Johnson.....	Pressnell, John.....	white	Murder 2d degree.	Nov. 21, '84	14
Knox....	Reed, John.....	colored	Larceny.	Sept. 24, '84	1½
Davidson.....	Sheot, Nathan.....	colored	Burglary & Larceny.	April 1, '76	12
Davidson....	Spence, Ned.....	colored	Burglary & Larceny.	Feb. 18, '82	10

sentences.

3 sentences.

Campbell.....	Seals, Johnson	colored	Burglary & Larceny.	March 26, '83	3
Scott..	Smith, Jerry.....	white	Felonious Assault.	Dec. 1, '83	5
Sullivan.....	Shipley, Hunt.....	colored	Larceny.	Dec. 8, '83	2
Washington ..	Stover, Sol.....	colored	Abduction.	Dec. 19, '83	10
Greene	Stafford, Hugh.....	white	Burglary.	Feb. 20, '84	4
Greene.....	Smith, William.....	white	Murder.	Feb. 21, '84	1½
Tipton	Smith, John B.....	white	Larceny.	Sept. 22, '84	1
Shelby.....	Smith, Berry.....	colored	Grand Larceny.	Sept. 26, '84	3
Campbell.....	Temple, Daniel.....	colored	Housebr'g & Larceny	March 26, '83	3
Fentress	Tabor, Stanton.....	white	Housebr'g & Larceny	Dec. 4, '83	3
Roane.....	Taylor, Jack.....	white	Murder.	April, 17, '84	2
Shelby.....	Tucker, Anthony.....	colored	Grand Larceny.	Aug. 20, '84	3
Knox.....	Tolbut, Frank.....	colored	Larceny.	Sept. 24, '84	2
Bradley.....	Taylor, Sam.....	colored	Housebreaking.	Sept. 6, '84	2
Shelby.....	Thomas, John.....	colored	Forgery.	Sept. 26, '84	3
Shelby... ..	Thomas, Ben	colored	Petit Larceny.	Sept. 26, '84	1
Fentress	Vaughn, Ervin	white	Larceny.	July 31, '83	3
Hawkins	West, Frank.....	white	Larceny.	Jan. 31, '82	5
Gibson.....	Williams, Bill	colored	Larceny.	Aug. 2, '81	6
Knox.....	Weir, A. H.....	white	Forgery.	Sept. 20, '82	3
Anderson.....	Weaver, Louis.....	colored	Larceny.	Nov. 18, '82	4
Loudon.....	Williams, Wm.....	colored	Larceny.	Jan. 1, '81	5
Campbell.....	Wallace, Alex.....	white	Felonious Assault.	March 26, '83	3
Washington ..	Washington, Lunar.....	colored	Larc'y, sen'ce expires	April 30, '87	2
Knox.....	Wilson, Ed.....	colored	Larceny.	June 5, '83	2
Shelby.....	Williams, J. W.....	colored	Larc'y, sen'ce expires	June 13, '90	3
Scott..	West, Robert	white	Housebreaking.	Dec. 1, '83	3
Hamblen.....	Ward, W	colored	Rescue.	April 14, '84	1

NAMES OF PRISONERS AT COAL CREEK, NOV. 30, 1884.

COUNTY.	NAME.	COLOR.	CRIME.	COM. OF SENTENCE.	RE- CEIVED
Gibson.....	Walker, George.....	colored	Horsesteal'g & Lar.	Aug. 2, '81	12 3 sentences.
Knox.....	Williams, Bob.....	colored	Train-wrecking.	July 1, '84	9
Shelby...	White, Bob.....	colored	Robbery.	Aug. 19, '84	5 2 sentences.
Shelby	Ward, Mose.....	colored	Assault to Murder.	Jan. 29, '84	18
Shelby	Wright, John.....	colored	Assault to Murder.	Sept. 10, '84	1
Roane.....	Williams, Thomas.....	white	Grand Larceny.	Aug. 14, '84	3
Shelby	Williams, Sam	colored	Assault to Murder.	Sept. 26, '84	1
Crockett	Wilson, Sol.....	colored	Larceny.	Oct. 4, '84	2
Hamblen.....	Woody, L. D.....	white	Assault to Murder.	Nov. 5, '84	3
Morgan.....	Webb, Elias.....	white	Horsestealing.	Nov. 6, '84	3
Montgomery..	Wimberly, Joe.....	colored	Manslaughter.	June 20, '82	3

**NAMES OF PRISONERS DISCHARGED UNDER THE ACTS OF 1836 AND 1870,
FROM DECEMBER 1, 1882, TO DECEMBER 1, 1883.**

NAMES.	COLOR.	COUNTY.	WHEN DISCHARGED.	TERM SERV'D	DISCHARGED AT
Matthews, Henry	colored	Davidson.....	Dec. 2, '82	3	Nashville.
Bryan, Calvin.....	white	McNairy.....	Dec. 7, '82	3	Nashville.
Frank, Leon.....	colored	Shelby	Dec. 11, '82	3	Nashville.
Wherry, Amanda	colored	Davidson.....	Dec. 17, '82	1	Nashville.
Ferrell, John.....	colored	Davidson.....	Dec. 18, '82	3	Nashville.
Anderson, Wm	white	Decatur	Dec. 23, '82	3	Nashville.
McDonald, Jane.....	colored	Davidson.....	Dec. 24, '82	1	Nashville.
Bruno, John.....	white	Shelby	Dec. 23, '82	6	Nashville.
Mack, Francis.....	colored	Cannon	Dec. 25, '82	3	Nashville.
Jennings, Joseph.....	colored	Rutherford....	Dec. 6, '82	1½	K. & O. R. R.
Young, Green.....	colored	Davidson	Dec. 8, '82	3	K. & O. R. R.
Brown, Toney	colored	Davidson	Dec. 21, '82	1	Tracy City.
Woods, Henry.....	colored	Shelby	Dec. 22, '82	18	Tracy City.
Neely, William.....	colored	Davidson	Dec. 23, '82	1	Tracy City.
Turner, Grant.....	colored	James.....	Dec. 23, '82	1	Tracy City.
Johnson, Harris.....	colored	Shelby	Dec. 25, '82	10	Tracy City.
Jennings, Alf.....	colored	Wilson	Dec. 26, '82	1	Tracy City.
Price, Jack.....	colored	Wilson	Dec. 26, '82	1	Tracy City.
Hammer, William.....	colored	Wilson	Dec. 26, '82	1	Tracy City.
Frierson, Tom	colored	Maury	Dec. 30, '82	10	Tracy City.
Smith, Larkin.....	colored	Gibson	Jan. 1, '83	2	Nashville.

Hudson, Barney	colored	Gibson	Jan.	1, '83	2	Nashville.
Head, Henry	white	Obion	Jan.	6, '83	3	Nashville.
Manis, John	white	Henderson ..	Jan.	6, '83	3	Nashville.
Malone, Alice	colored	Davidson	Jan.	6, '83	3	Nashville.
Cage, Sarah	colored	Davidson	Jan.	9, '83	3	Nashville.
Work, Wm	colored	Davidson	Jan.	10, '83	1	Nashville.
Sumner, John	colored	Davidson	Jan.	10, '83	1	Nashville.
Caroway, Cal	colored	Fayette	Jan.	10, '83	3	Nashville.
Morman, Thos	colored	Davidson	Jan.	15, '83	1	Spence Farm.
Fuller, Peter	colored	Davidson	Jan.	15, '83	1	Spence Farm.
Watkins, Peter	colored	Maury	Jan.	15, '83	1	Nashville.
Smith, Phil	colored	Davidson	Jan.	15, '83	1	Nashville.
Taylor, James	colored	Davidson	Jan.	10, '83	10	Tracy City.
Edmonds, Jno	colored	Madison	Jan.	17, '83	1	Nashville.
Lacky, Bob	colored	Madison	Jan.	18, '83	1	Spence Farm.
Brown, Frank	colored	Madison	Jan.	19, '83	1	Nashville.
Winston, Jno	colored	Madison	Jan.	19, '83	1	Nashville.
Faris, Scott	colored	Moore	Jan.	22, '83	1	Nashville.
Gray, Elijah	white	Greene	Jan.	22, '83	1	Nashville.
Brown, Wm	colored	Knox	Jan.	15, '83	5	Coal Creek.
Luttrell, Martha	colored	Cannon	Jan.	18, '83	3	Coal Creek.
Ingram, Marion	white	Robertson	Jan.	27, '83	4 ¹	Nashville.
Moore, William	white	Pickett	Jan.	31, '83	1	Nashville.
McCalister, James	white	Henderson ..	Jan.	31, '83	8	Nashville.
Bush, D. H.	white	Henderson	Jan.	31, '83	8	Nashville.
Cooper, Jessie	colored	Shelby	Jan.	25, '83	5	Tracy City.
Vaughn, John	white	Davidson	Jan.	16, '83	4	Hatton.
Crutcher, Alex	colored	Williamson ..	Jan.	28, '83	3	Hatton.

NAMES OF PRISONERS DISCHARGED UNDER THE ACTS OF 1836 AND 1870,
FROM DECEMBER 1, 1882, TO DECEMBER 1, 1883.

NAMES.	COLOR.	COUNTY.	WHEN DISCHARGED.	TERM SERV'D	DISCHARGED AT.
Johnson, Frank.....	colored	Campbell.....	Jan. 26, '83	3	Coal Creek.
McTinge, Jno.....	white	Davidson.....	Feb. 2, '83	1	Nashville.
Hill, Harry.....	white	Davidson.....	Feb. 3, '83	1	Nashville.
Barnes, Charles.....	colored	Davidson.....	Feb. 3, '83	1	Nashville.
Boyd, Wm.....	colored	Madison.....	Feb. 5, '83	1	Nashville.
Clayborne, George.....	colored	Gibson.....	Feb. 6, '83	3	Nashville.
Hopkins, Riley.....	white	Giles.....	Feb. 8, '83	3	Nashville.
Allen, John.....	white	Davidson.....	Feb. 9, '83	9	Nashville.
Mullengett, Pierre.....	white	Shelby.....	Feb. 10, '83	8	Nashville.
Randle, Mary.....	colored	Sumner.....	Feb. 11, '83	1	Spence Farm.
Richard, Grigsby.....	white	Bradley.....	Feb. 4, '83	2	Tracy City.
Harris, Wm.....	colored	Obion.....	Feb. 4, '83	3	Tracy City.
Day, Lee.....	colored	Madison.....	Feb. 4, '83	4	Tracy City.
Scribner, James.....	colored	Marshall.....	Feb. 6, '83	7	Tracy City.
Jones, Walter.....	colored	Davidson.....	Feb. 7, '83	4	Tracy City.
Goines, Thomas.....	white	Carter.....	Feb. 13, '83	1	Nashville.
Bailey, James.....	white	Carter.....	Feb. 13, '83	1	Nashville.
Carr, Samuel.....	white	Carter.....	Feb. 13, '83	1	Nashville.
Poor, Rich.....	white	Fentress.....	Feb. 7, '83	3	Coal Creek.
Roller, Joe.....	white	Davidson.....	Feb. 15, '83	1	Nashville.
Evans, Charles.....	colored	Fayette.....	Feb. 15, '83	1	Nashville.

Hill, Jordan.....	colored	Davidson.....	Feb.	15, '83	1	Nashville.
Harris, Lewis.....	colored	Sumner.....	Feb.	15, '83	1	Nashville.
Boyd, George.....	colored	Davidson.....	Feb.	15, '83	1	Nashville.
Mays, Alf.....	colored	Davidson.....	Feb.	15, '83	1	Nashville.
Bowen, Monroe.....	colored	Montgomery..	Feb.	19, '83	1	Spence Farm.
Faines, Frank.....	colored	Hamilton.....	Feb.	16, '83	4	Coal Creek.
Brown, George.....	colored	Maury.....	Feb.	13, '83	5	Ensley's Farm.
Smith, Henry.....	colored	Fayette.....	Feb.	16, '83	1	Coal Creek.
Teague, John.....	white	Johnson.....	Feb.	23, '83	1	Nashville.
Martin, Henry.....	colored	Haywood.....	Feb.	24, '83	2	Nashville.
Perry, Wm.....	colored	Smith.....	Feb.	7, '83	3	Nashville.
Elvin, James.....	white	Henry.....	Feb.	24, '83	2	Nashville.
James, J. W.....	white	Lauderdale...	Feb.	20, '83	5	Tracy City.
Cathey, Charles.....	colored	Lincoln.....	Feb.	21, '83	1	Tracy City.
Sullivan, Wiley.....	colored	Lincoln.....	Feb.	22, '83	1	Tracy City.
Tallent, Sullivan.....	white	Scott.....	Feb.	28, '83	1	Nashville.
Hamilton, Wm.....	colored	Madison.....	Feb.	28, '83	15	Nashville.
Taylor, William.....	colored	Ohion.....	Feb.	28, '83	1	Nashville.
Thompson, Jack.....	colored	Williamson...	Feb.	28, '83	1	Nashville.
Rainey, Thomas.....	white	Davidson.....	Feb.	23, '83	10	Coal Creek.
Smith, Joe.....	colored	Knox.....	Feb.	23, '83	2	Coal Creek.
Jones, Henry.....	colored	Shelby.....	Dec.	12, '82	3	Ensley's Farm.
Sykes, Reuben.....	colored	Shelby.....	Dec.	12, '82	3	Ensley's Farm.
Dowell, Sam.....	colored	Smith.....	March	2, '83	5	Nashville.
Wilson, Alf.....	colored	Madison.....	March	3, '83	5	Nashville.
Brown, Dazey.....	colored	Davidson.....	March	3, '83	5	Nashville.
Miller, Tom.....	colored	Gibson.....	March	3, '83	1	Nashville.
Williams, Lewis.....	colored	Gibson.....	March	3, '83	1	Nashville.

NAMES OF PRISONERS DISCHARGED UNDER THE ACTS OF 1836 AND 1870,
FROM DECEMBER 1, 1882, TO DECEMBER 1, 1883.

NAMES.	COLOR.	COUNTY.	WHEN DISCHARGED.	TERM SERV'D	DISCHARGED AT
Houghton, Calvin.....	colored	Madison	March 3, '83	1	Nashville.
Lauderdale, Linas.....	colored	Tipton	March 26, '83	6	Tracy City.
Jones, Orange	colored	Haywood	March 25, '83	1	Tracy City.
Johnson, Alf.....	colored	Warren.....	March 27, '83	2	Tracy City.
Patterson, Sam.....	colored	Wilson.....	March 27, '83	7	Tracy City.
Belcher, Jerry.....	colored	Wilson.....	March 1, '83	10	Tracy City.
Haley, Meredith.....	colored	Williamson	March 1, '83	1	Tracy City.
White, James.....	white	Grainger	March 2, '83	3	Tracy City.
McCoy, James	colored	Shelby.....	Feb. 26, '83	10	Coal Creek.
Cates, David	colored	McMinn	Feb. 11, '83	3	Tracy City.
Coffee, Geo.....	colored	Maury.....	Feb. 11, '83	1	Tracy City.
David, Lock.....	white	White	Feb. 16, '83	1	Tracy City.
Street, Walter.....	colored	Lincoln	Feb. 17, '83	1	Tracy City.
Bryson, Wm.....	colored	Greene.....	Feb. 17, '83	5	Tracy City.
Estes, Sol.....	colored	Maury	March 9, '83	2	Nashville.
Price, Winston.....	colored	Bradley	March 9, '83	3	Nashville.
Wilson, Ann.	colored	Crockett	March 10, '83	2	Nashville.
Currin, W.....	colored	Rutherford..	March 10, '83	1	Nashville.
Ransom, Wash.....	colored	Williamson ..	March 10, '83	5	Nashville.
Caldwell, Wm.....	colored	Giles.....	Feb. 28, '83	6	Star Mines.
Ballinger, Reed.....	colored	Cocke	Feb. 26, '83	1	Coal Creek.

Handy, Bradford.....	colored	Madison	Feb. 26, '83	2	Coal Creek.
Wolf, Charles.....	colored	Hamblen.....	March 9, '83	1	Coal Creek.
Bish, John R.	white	Greene.....	March 14, '83	10	Nashville.
Fleming, Wyatt.....	colored	Haywood	March 7, '83	5	Tracy City.
Scott, James.....	white	Madison	March 14, '83	2	Nashville.
Haywood, Lee.....	white	Hamilton.....	March 16, '83	1	Nashville.
Bailey, Arthur.....	colored	Fayette.....	March 3, '83	5	Ensley's Farm.
Holly, Rufe.....	white	Hamilton	March 11, '83	1	Tracy City.
Hatfield, Samuel	white	Hamilton	March 11, '83	1	Tracy City.
Harris, John.....	white	Hamilton	March 11, '83	1	Tracy City.
McGuire, Chas.....	white	Hamilton	March 11, '83	1	Tracy City.
Henderson, Wm.....	white	Hamilton	March 11, '83	1	Tracy City.
Simins, Andrew.....	colored	Bedford.....	March 15, '83	1	Tracy City.
Tillman, Ambrose.....	colored	Bedford	March 15, '83	1	Tracy City.
Wood, W. B.....	colored	Smith	March 17, '83	1	Tracy City.
Anderson, Joe.....	white	Shelby	March 17, '83	5	Star Mines.
Bell, Henry.....	colored	Carroll.....	March 23, '83	3	Nashville.
Smith, Sam.....	white	Scott.....	March 24, '83	5	Nashville.
Parton, Manuel.....	white	Scott	March 24, '83	5	Nashville.
Kinnard, Frank.....	colored	Williamson	March 24, '83	10	Tracy City.
Smalley, Monroe.....	white	Benton	March 28, '83	3	Nashville.
Green, Fannie.....	colored	Davidson.....	March 26, '83	5	Spence Farm.
Oden, Chas.....	colored	Davidson.....	March 26, '83	14	Spence Farm.
Cartor, John.....	colored	Davidson	March 31, '83	3	Nashville.
Burton, John.....	colored	Shelby.....	March 20, '83	5	Ensley's.
Sanders, Peter.....	colored	James.....	March 27, '83	3	Tracy City.
Mason, John.....	colored	Loudon	March 27, '83	1	Star Mines.
Wilhoit, John.	white	Davidson.....	April 5, '83	1	Nashville.

6—Prison.

NAMES OF PRISONERS DISCHARGED UNDER THE ACTS OF 1836 AND 1870,
FROM DECEMBER 1, 1882, TO DECEMBER 1, 1883.

NAMES.	COLOR.	COUNTY.	WHEN DISCHARGED.	TERM SERV'D	DISCHARGED AT
Gray, Philip.....	white	Greene.....	April 5, '83	1 1/2	Nashville.
Watson, Cap.....	colored	Shelby... ..	April 1, '83	3	Ensley's.
Warwick, Trice.....	colored	Shelby... ..	April 1, '83	3	Ensley's.
Anderson, Charles.....	colored	Shelby.....	April 1, '83	3	Ensley's.
Haywood, Alonzo.....	colored	Shelby.....	April 1, '83	3	Ensley's.
Guild, Frank.....	colored	Sumner.....	April 7, '83	3	Nashville.
Leeper, David.....	colored	Knox	April 5, '83	3	Coal Creek.
Rice, Henry.....	white	Robertson.....	April 13, '83	3	Nashville.
Harrison, Will.....	colored	Shelby... ..	April 2, '83	3	Ensley's.
Mountcastle, Isham.....	colored	Jefferson.....	April 14, '83	5	Nashville.
Harris, Henry.....	colored	Shelby.....	April 16, '83	4	Nashville.
Taylor, Edmond	colored	Shelby.....	April 13, '83	1 1/2	Ensley's.
Wilkinson, Joe	colored	Tipton.....	April 19, '83	1	Nashville.
Oden, William.....	colored	Davidson.....	April 21, '83	3	Nashville.
Wilkinson, Adam.....	colored	Davidson.....	April 23, '83	3	Nashville.
Brown, John	colored	Shelby.....	April 17, '83	1	Ensley's.
Coward, Henry.....	colored	Tipton.....	April 20, '83	1	Star Mines.
Burk, George.....	white	Sullivan.....	April 28, '83	10	Nashville.
Ladd, Oscar	colored	Shelby.....	April 28, '83	1	Nashville.
McClelland, Charlie.....	colored	Lincoln	April 16, '83	2	Tracy City.
Dibrell, George.....	colored	Wilson.....	April 28, '83	1	Nashville.

Lawrence, Charles.....	white	Shelby	April	30, '83	10	Nashville.
Scott, Fannie	white	Henderson. ...	April	30, '83	3	Nashville.
Smith, Riley	white	Meigs.....	May	2, '83	4	Nashville.
Crisp, Charles	colored	Gibson.	May	2, '83	2	Spence Farm.
Robb, Charles.....	colored	Sumner.	May	4, '83	3	Nashville.
Hodge, George.....	colored	Rutherford...	May	5, '83	1	Nashville.
Woodson, Lewis.....	colored	Sumner.	May	9, '83	3	Nashville.
Kelly, Green	colored	Madison	May	10, '83	3	Nashville.
Tillman, Albert.....	colored	Shelby.. ..	April	30, '83	5	Ensley's.
Hammons, Albert.....	colored	Haywood.....	May	11, '83	3	Nashville.
Patterson, James.....	white	Henry	May	12, '83	1	Nashville.
Glover, Em.....	white	Henry	May	12, '83	1	Nashville.
Olney, Wm. F.....	white	Henry.....	May	12, '83	1	Nashville.
Nelson, Lafayette.....	colored	Henry	May	12, '83	1	Nashville.
Hightower, Lee.....	white	Madison	May	15, '83	1	Nashville.
Wade, Eph.....	colored	Maury	May	16, '83	1	Nashville.
McKusack, Henry.....	colored	Maury	May	16, '83	1	Nashville.
Barnes, Archie.....	colored	Maury	May	16, '83	1	Nashville.
Wilson, J. T.....	white	Knox.....	May	13, '83	3	Coal Creek.
Johnson, Eph.....	colored	Rutherford ...	May	16, '83	10	Ensley's.
Ivey, Wm.....	white	Putnam.....	May	17, '83	1	Nashville.
McKinney, James	white	Davidson.....	May	17, '83	3	Nashville.
Reed, John.. ..	white	Shelby.....	May	18, '83	3	Nashville.
Curtis, Ed.....	white	Warren	May	19, '83	4	Nashville.
Yarbrough, Elijah.....	white	Weakley	May	21, '83	1	Nashville.
Coleman, Eldridge.....	colored	Weakley	May	21, '83	1	Nashville.
Hoenbeck, Louis.....	colored	Weakley	May	21, '83	1	Nashville.
Richardson, John.....	white	Henderson	May	22, '83	3	Nashville.

NAMES OF PRISONERS DISCHARGED UNDER THE ACTS 1836 AND 1870,
FROM DECEMBER 1, 1882, TO DECEMBER 1, 1883.

NAMES.	COLOR.	COUNTY.	WHEN DISCHARGED.	TERM SERV'D	DISCHARGED AT
Winston, John.....	colored	Bedford.....	May 15, '83	2	Tracy City.
Smith, Fulton.....	colored	Lincoln.....	May 8, '83	3	Tracy City.
Montgomery, Sam..	colored	Marshall.....	May 14, '83	10	Tracy City.
Johnson, Eli.....	colored	Lincoln.....	May 10, '83	3	Tracy City.
Chambers, Rob.	colored	Bedford.....	May 10, '83	2	Tracy City.
Anderson, Caleb.....	colored	Rutherford....	May 13, '83	15	Tracy City.
Britt, Wesley.....	colored	Wayne.....	May 17, '83	1	Coal Creek.
Robinson, Will.....	colored	Madison.....	May 17, '83	1	Coal Creek.
Turnipseed, Isaac.....	colored	Madison.....	May 17, '83	1	Coal Creek.
Martin, Wilson.....	white	Knox.....	May 14, '83	3	Coal Creek.
Tasley, Charles	colored	Cheatham..	May 23, '83	1	Coal Creek.
Sheron, Isaac.....	colored	Cheatham..	May 23, '83	1	Coal Creek.
Fields, James.....	white	Humphreys ..	May 29, '83	3	Coal Creek.
Jones, John.....	colored	Hamilton.....	May 16, '83	2	Tracy City.
Hawkins, Wm.....	white	Rhea.....	May 18, '83	1	Tracy City.
Anderson, Wm.....	colored	Davidson.....	May 20, '83	3	Tracy City.
Alexander, Sol.....	colored	Morgan.....	May 24, '83	3	Tracy City.
Kennedy, Jack.....	colored	Tipton.....	May 26, '83	5	Ensley's Farm.
Davidson, Holcomb.....	colored	Morgan.....	May 24, '83	10	Tracy City.
Taylor, Scott	colored	Shelby	May 23, '83	3	Ensley's Farm.
Lawrence, George	white	Gibson	June 2, '83	8	Nashville,

Chopman, John	colored	Gibson.....	June	2, '83	3	Nashville.
Scott, James.....	colored	Gibson.....	June	2, '83	3	Nashville.
Mayhew, James.....	colored	Morgan.....	May	29, '83	10	Ensley's Farm.
Elliot, Bob.....	white	Shelby	June	7, '83	3	Nashville.
Payne, Johnson.....	colored	Shelby.....	June	7, '83	3	Nashville.
Black, Hogan	colored	Fayette.....	June	8, '83	1	Nashville.
Fort, Henry.....	colored	Montgomery ..	June	8, '83	5	Nashville.
Paine, Jerry.....	colored	Hawkins	June	6, '83	5	Coal Creek.
Alexander, Henry.....	colored	Fayette.....	June	9, '83	1	Coal Creek.
Bullard, Wm.....	white	DeKalb	June	16, '83	1	Nashville.
Richard, Evans.....	white	Greene	June	10, '83	5	Coal Creek.
Young, Wm.....	colored	Sumner.....	June	11, '83	1	Coal Creek.
Harris, William.....	colored	Shelby	June	14, '83	1	Ensley's Farm.
Jackson, Lucinda.....	colored	Shelby	June	14, '83	1	Ensley's Farm.
Hall, Andy.....	colored	Tipton	June	20, '83	2	Nashville.
Ayers, John	white	Marion.....	June	13, '83	1	Tracy City.
Davis, G. C.....	colored	Lincoln	June	17, '83	1	Tracy City.
Hedden, Harvey.....	white	Polk.....	June	11, '83	5	Tracy City.
Watkins, Lewis.....	white	Dyer	June	7, '83	10	Tracy City.
Underwood, Nora... ..	colored	Hamilton.....	June	20, '83	1	Tracy City.
Martin, Henry.....	white	Knox.....	June	27, '83	10	Nashville.
Williams, James.....	colored	Shelby.....	June	22, '83	3½	Ensley's Farm.
Moore, Wm.....	colored	Stewart.....	June	28, '83	3½	Nashville.
Riggs, Jonas.....	white	Lawrence.....	June	28, '73	3	Nashville.
Jester, Jno.....	white	Madison	June	30, '83	5	Nashville.
Rollins, Wm.....	colored	Davidson.....	June	30, '83	4	Nashville.
Prim, Tom.....	colored	Williamson	June	28, '83	1	Coal Creek.
Jordan, Andrew.....	colored	Williamson	June	28, '83	1	Coal Creek.

NAMES OF PRISONERS DISCHARGED UNDER THE ACTS 1836 AND 1870,
FROM DECEMBER 1, 1882, TO DECEMBER 1, 1883.

NAMES.	COLOR.	COUNTY.	WHEN DISCHARGED.	TERM SERV'D	DISCHARGED AT
Snow, Monroe.....	colored	Shelby	June 27, '83	2	Ensley' Farm.
Johnson, Amy	colored	Marshall.....	July 4, '83	2	Nashville.
Clement, Frank.....	colored	Gibson.	July 5, '83	3	Nashville.
Coleman, Lewis.	colored	Gibson... ..	July 6, '83	3	Spence Farm.
Ross, Stafford.....	colored	Shelby	July 8, '83	2	Ensley's Farm.
Whitside, Joseph.....	colored	Grainger.....	July 6, '83	3	Coal Creek.
Hopwood, Dick.....	white	Marshall.....	July 14, '83	3	Nashville.
Wormick, Wm.	colored	Warren.....	July 14, '83	3	Nashville.
Taylor, George.....	white	Clay.....	July 14, '83	3	Nashville.
Ford, Wm.....	white	Overton.....	July 14, '83	1	Nashville.
Willey, Lafayette.	colored	Knox.....	July 14, '83	21	Nashville.
Purdy, James.	colored	Marshall.....	July 16, '83	2	Spence Farm.
Johnson, Jack.....	colored	Marshall.....	July 16, '83	2	Spence Farm.
Hicks, James	white	Macon.....	July 20, '83	4	Nashville.
Randolph, Henry.....	colored	Rutherford....	July 21, '83	1	Nashville.
Sliger, John.....	white	White	July 26, '83	11	Nashville.
Brown, James... ..	colored	Jefferson	July 17, '83	1	Coal Creek.
Warren, James.....	colored	Davidson.....	July 27, '83	3	Nashville.
Overton, Andrew.....	colored	Davidson.....	July 27, '83	3	Nashville.
Caruthers, Harriett.....	colored	Lawrence.....	July 28, '83	1	Nashville.
Belmire, Ch. H.....	white	Lawrence.....	July 28, '83	1	Nashville.

Martin, W. E.....	white	Lawrence	July	28, '83	1	Nashville.
Henderson, John.....	colored	Hamilton.....	July	12, '83	1	Tracy City.
March, Geo.....	colored	Polk.....	July	17, '83	3	Tracy City.
Rice, Lewis.....	colored	Haywood	July	14, '83	5	Tracy City.
Shaw, Ed.....	colored	Shelby	July	17, '83	10	Tracy City.
Bond, Abner.....	colored	Crockett	July	14, '83	2	Tracy City.
Fields, Lula.....	colored	Davidson.....	Aug.	1, '83	2	Nashville.
Wills, Wesley.....	colored	Shelby ..	July	29, '83	2	Ensley's Farm.
Cook, W. G.....	white	Knox.....	Aug.	1, '83	3	Coal Creek.
Hestley, Alex.....	colored	Lawrence.....	Aug.	1, '83	1	Coal Creek.
Shannon, Tom.....	white	Shelby	Aug.	8, '83	3	Nashville.
Crawford, James.....	white	Shelby	Aug.	8, '83	3	Nashville.
Gregory, Frank.....	colored	Crockett	Aug.	10, '83	3	Nashville.
Welsh, Ed.....	colored	Warren.....	July	31, '83	3	Tracy City.
Walker, Wm.....	colored	Maury	Aug.	7, '83	10	Coal Creek.
Jamison, R. B.....	white	Shelby	Aug.	15, '83	3	Nashville.
Smith, Jim.....	white	Shelby	Aug.	16, '83	12	Nashville.
Collins, Frank.....	colored	Davidson.....	Aug.	21, '83	1	Nashville.
Morgan, Bill.....	colored	Davidson.....	Aug.	21, '83	1	Nashville.
Brown, Joe.....	white	Anderson	Aug.	10, '83	2	Coal Creek.
Neal, Sam.....	colored	Madison.....	Aug.	22, '83	3	Nashville.
Hicks, Anthony.....	colored	Davidson.....	Aug.	22, '83	3	Nashville.
Jackson, John.....	colored	Shelby	Aug.	25, '83	1	Nashville.
Harris, John R.....	colored	Loudon.....	Aug.	27, '83	14	Nashville.
Miner, Jeff.....	white	Hawkins.....	Aug.	25, '83	1	Coal Creek.
Dixon, Sam.....	colored	Williamson ..	Aug.	28, '83	2	Nashville.
Nelson, Henry.....	colored	Shelby	Aug.	29, '83	1	Spence Farm.
Ellis, C. C.....	white	Decatur	Sept.	3, '83	3	Nashville.

NAMES OF PRISONERS DISCHARGED UNDER THE ACTS 1836 AND 1870,
FROM DECEMBER 1, 1882, TO DECEMBER 1, 1883.

NAMES.	COLOR.	COUNTY.	WHEN DISCHARGED.	TERM SERV'D	DISCHARGED AT
Snow, Monroe.....	colored	Shelby	June 27, '83	2	Enasley' Farm.
Johnson, Amy.....	colored	Marshall.....	July 4, '83	2	Nashville.
Clement, Frank.....	colored	Gibson.....	July 5, '83	3	Nashville.
Coleman, Lewis.....	colored	Gibson.....	July 6, '83	3	Spence Farm.
Ross, Stafford.....	colored	Shelby	July 8, '83	2	Enasley's Farm.
Whitside, Joseph.....	colored	Shelby	July 6, '83	3	Coal Creek.
Hopwood, Dick.....	white	Grainger.....	July 14, '83	3	Nashville.
Wormick, Wm.....	colored	Warren.....	July 14, '83	3	Nashville.
Taylor, George.....	white	Clay.....	July 14, '83	3	Nashville.
Ford, Wm.....	white	Overton.....	July 14, '83	1	Nashville.
Willey, Lafayette.....	colored	Knox.....	July 14, '83	21	Nashville.
Purdy, James.....	colored	Marshall.....	July 16, '83	2	Spence Farm.
Johnson, Jack.....	colored	Marshall.....	July 16, '83	2	Spence Farm.
Hicks, James.....	white	Macon.....	July 20, '83	4	Nashville.
Randolph, Henry.....	colored	Rutherford....	July 21, '83	1	Nashville.
Sliger, John.....	white	White	July 26, '83	11	Nashville.
Brown, James... ..	colored	Jefferson	July 17, '83	1	Coal Creek.
Warren, James.....	colored	Davidson.....	July 27, '83	3	Nashville.
Overton, Andrew.....	colored	Davidson.....	July 27, '83	3	Nashville.
Caruthers, Harriett.....	colored	Lawrence.....	July 28, '83	1	Nashville.
Belmire, Ch. H.....	white	Lawrence.....	July 28, '83	1	Nashville.

Martin, W. E.....	white	Lawrence	July	28, '83	1	Nashville.
Henderson, John.....	colored	Hamilton.....	July	12, '83	1	Tracy City.
March, Geo.....	colored	Polk.....	July	17, '83	3	Tracy City.
Rice, Lewis.....	colored	Haywood	July	14, '83	5	Tracy City.
Shaw, Ed.....	colored	Shelby	July	17, '83	10	Tracy City.
Bond, Abner.....	colored	Crockett	July	14, '83	2	Tracy City.
Fields, Lula.....	colored	Davidson.....	Aug.	1, '83	2	Nashville.
Wills, Wesley.....	colored	Shelby ..	July	29, '83	2	Ensley's Farm.
Cook, W. G.....	white	Knox.....	Aug.	1, '83	3	Coal Creek.
Hestley, Alex.....	colored	Lawrence.....	Aug.	1, '83	1	Coal Creek.
Shannon, Tom.....	white	Shelby	Aug.	8, '83	3	Nashville.
Crawford, James.....	white	Shelby	Aug.	8, '83	3	Nashville.
Gregory, Frank.....	colored	Crockett	Aug.	10, '83	3	Nashville.
Welsh, Ed.....	colored	Warren.....	July	31, '83	3	Tracy City.
Walker, Wm.....	colored	Madison	Aug.	7, '83	10	Coal Creek.
Jamison, R. B.....	white	Maury	Aug.	15, '83	3	Nashville.
Smith, Jim.....	white	Shelby	Aug.	16, '83	12	Nashville.
Collins, Frank.....	colored	Davidson.....	Aug.	21, '83	1	Nashville.
Morgan, Bill.....	colored	Davidson.....	Aug.	21, '83	1	Nashville.
Brown, Joe.....	white	Anderson	Aug.	10, '83	2	Coal Creek.
Neal, Sam.....	colored	Madison.....	Aug.	22, '83	3	Nashville.
Hicks, Anthony.....	colored	Davidson.....	Aug.	22, '83	3	Nashville.
Jackson, John.....	colored	Shelby	Aug.	25, '83	1	Nashville.
Harris, John R.....	colored	Loudon.....	Aug.	27, '83	1½	Nashville.
Miner, Jeff.....	white	Hawkins	Aug.	25, '83	1	Coal Creek.
Dixon, Sam.....	colored	Williamson	Aug.	28, '83	2	Nashville.
Nelson, Henry.....	colored	Shelby	Aug.	29, '83	1	Spence Farm.
Ellis, C. C.....	white	Decatur	Sept.	3, '83	3	Nashville.

NAMES OF PRISONERS DISCHARGED UNDER THE ACTS OF 1836 AND 1870,
FROM DECEMBER 1, 1882, TO DECEMBER 1, 1883.

NAMES.	COLOR.	COUNTY.	WHEN DISCHARGED.	TERM SERV'D	DISCHARGED AT
Hardy, Wash.....	white	Haywood	Aug. 12, '83	10	Tracy City.
Roman Warren.....	white	Madison	Aug. 16, '83	10	Tracy City.
Mathews, Tom.....	white	Tipton	Aug. 16, '83	1	Tracy City.
Brooks, John.....	white	Davidson.....	Aug. 26, '83	3	Tracy City.
Young, Rich.....	white	Davidson.....	Aug. 28, '83	3	Tracy City.
Maxwell, Andrew.....	white	Henderson	Sept. 12, '83	7	Nashville.
Jones, Moses.....	colored	James	Sept. 3, '83	1	Tracy City.
Tucker, Wm.....	white	Rutherford....	Sept. 14, '83	10	Nashville.
Franklin, James.....	colored	Davidson.....	Sept. 14, '83	7	Nashville.
Lowe, William	white	Fayette.....	Sept. 15, '83	3	Nashville.
Willis, Henderson.....	white	Clay.....	Sept. 10, '83	1	Coal Creek.
Thomason, John.....	white	Greene.....	Sept. 11, '83	1	Coal Creek.
Scruggs, Rich.	colored	Greene.....	Sept. 13, '83	1	Coal Creek.
Todd, Jon.....	colored	Rutherford....	Sept. 12, '83	6	Tracy City.
Neely, Ben.....	colored	Shelby	Sept. 12, '83	2	Tracy City.
Griffin, Fillmore.....	white	Greene.....	Sept. 14, '83	1	Tracy City.
Key, Arthur.....	colored	Haywood.....	Sept. 15, '83	3	Tracy City.
Booker, Green.....	colored	Davidson.....	Sept. 7, '83	3	Inman.
Roy, Jno.....	colored	James.....	Sept. 24, '83	1	Coal Creek.
Schooley, Geo.....	white	Davidson.....	Oct. 5, '83	4½	Nashville.
Strong, Dan.....	colored	Shelby	Sept. 24, '83	3	Tracy City.

Masey, Bill.....	white	Sevier.....	Sept.	29, '83	3	Tracy City.
Smith, Simon.....	colored	Knox.....	Sept.	17, '83	5	Tracy City.
Williams, Henry.....	colored	Williamson.....	Sept.	30, '83	3	Tracy City.
Alstead, Henry.....	colored	Davidson.....	Sept.	30, '83	1	Tracy City.
Turner, Randal.....	colored	Marshall.....	Sept.	17, '83	1	Tracy City.
Jamison, Charles.....	colored	Gibson.....	Sept.	4, '83	2	Tracy City.
Robertson, James.....	colored	Dyer.....	Sept.	8, '83	4	Tracy City.
Winston, John.....	colored	Weakley.....	Sept.	8, '83	3	Tracy City.
Hallyburton, James.....	colored	Rutherford.....	Sept.	20, '83	2	Tracy City.
Alexander, John.....	colored	Hamilton.....	Sept.	29, '83	3	Tracy City.
Ketchum, Lynn.....	colored	Fayette.....	Sept.	16, '83	3	Tracy City.
Hash, A.....	white	Stewart.....	Oct.	12, '83	3	Nashville.
Owens, George.....	white	Davidson.....	Oct.	16, '83	1	Nashville.
Rollin, Duke.....	colored	Lincoln.....	Oct.	19, '83	4	Nashville.
Carlton, T. H.....	white	Rutherford.....	Oct.	19, '83	3	Nashville.
Speed, George.....	colored	Shelby.....	Oct.	9, '83	1	Inman.
Prewitt, Thos.....	white	Weakley.....	Oct.	5, '83	1	Inman.
Jackson, Wm.....	colored	Fayette.....	Oct.	4, '83	1	Tracy City.
Taylor, William.....	colored	Fayette.....	Oct.	4, '83	1	Tracy City.
Grant, Cruse.....	colored	Davidson.....	Oct.	4, '83	1	Tracy City.
McCully, Fannie.....	colored	Fayette.....	Oct.	4, '83	1	Tracy City.
Twitty, Thomas.....	colored	Cocke.....	Oct.	7, '83	3	Tracy City.
Hatcher, Coleman.....	colored	Montgomery.....	Oct.	5, '83	2	Tracy City.
Jackson, Charlotte.....	colored	Fayette.....	Oct.	4, '83	1	Tracy City.
Read, Wesley.....	colored	Haywood.....	Oct.	10, '83	1	Tracy City.
Ferguson, Wm.....	white	Coffee.....	Oct.	11, '83	2	Tracy City.
Talley, Mathilda.....	colored	Marion.....	Oct.	10, '83	1	Tracy City.
Richardson, Andrew.....	colored	Shelby.....	Oct.	6, '83	2	Tracy City.

NAMES OF PRISONERS DISCHARGED UNDER THE ACTS OF 1836 AND 1870,
FROM DECEMBER 1, 1882, TO DECEMBER 1, 1883.

NAME.	COLOR.	COUNTY.	WHEN DISCHARGED.	TERM SERV'D	DISCHARGED AT
Britton, Houston.....	colored	Shelby	Oct. 15, '83	10	Tracy City.
Woods, Ed.....	colored	Shelby	Oct. 16, '83	1	Inman.
Buchanan, Chas.....	colored	Davidson.....	Oct. 16, '83	1	Tracy City.
Jones, Jim.....	colored	Knox.....	Oct. 19, '83	10	Tracy City.
Landrum, Henry.....	colored	Lake.....	Oct. 14, '83	3	Tracy City.
Miller, Albert.....	colored	Giles	Oct. 14, '83	3	Tracy City.
Smith, Wm.....	colored	Giles.. ..	Oct. 14, '83	3	Tracy City.
Thomas, Lewis.....	colored	Davidson.....	Oct. 14, '83	1	Tracy City.
Washington, Ford.....	colored	Lincoln	Oct. 20, '83	1	Tracy City.
Comer, Ned.....	colored	Davidson	Oct. 29, '83	1	Spence Farm.
Hilton, Robt.....	white	Greene.....	Oct. 30, '83	5	Tracy City.
Atkins, Isaac.....	colored	Shelby	Oct. 26, '83	10	Tracy City.
Ingraham, Pres.....	colored	Giles.....	Oct. 22, '83	13	Tracy City.
Johnson, Henry.....	colored	Shelby.....	Oct. 22, '83	2	Tracy City.
Lytle, Tom.....	colored	Rutherford	Oct. 22, '83	3	Tracy City.
Powell, James.....	colored	Giles.....	Oct. 25, '83	10	Tracy City.
Taylor, Isaac	colored	Shelby	Oct. 25, '83	3	Tracy City.
Walden, Wm.....	colored	Bedford	Oct. 22, '83	2	Tracy City.
McClain, A. P.....	white	Grainger	Oct. 28, '83	3	Tracy City.
Webster, Addison.....	colored	Davidson.....	Oct. 28, '83	1	Tracy City.
Knight, Joe.....	colored	Davidson.....	Oct. 31, '83	5	Tracy City.

Pirtle, Henry.....	colored	Hardeman.....	Nov.	5, '83	1	Spence Farm.
Wade, Anderson	colored	Hardeman.....	Nov.	5, '83	1	Spence Farm.
Braswell, Demphisie.....	white	DeKalb.	Nov.	1, '83	1	Waters, at Lebanon.
Black, Jeff.....	colored	Houston	Nov.	5, '83	1	Spence Farm.
Gross, George.....	white	Coffee.....	Nov.	3, '83	3	Tracy City.
McNeal, Jeff	colored	Hardeman.....	Nov.	6, '83	1	Spence Farm.
Wright, John.....	white	Knox.....	Nov.	1, '83	2	Coal Creek.
Ferris, Lee.....	colored	Davidson.....	Oct.	7, '83	1	Tracy City.
Rooney, Wm.....	white	Davidson.....	Nov.	10, '83	10	Nashville.
Thompson, Burton.....	colored	Shelby	Nov.	13, '83	1	Spence Farm.
Martin, Silas.....	colored	Rutherford ...	Nov.	10, '83	1	Nashville.
Wilson, Pink.....	colored	Rutherford.....	Nov.	12, '83	1	Spence Farm.
Finn, Henry.....	colored	Davidson.....	Nov.	10, '83	10	Inman.
Meeks, Lafayette Simms.....	colored	White	Nov.	9, '83	5	Inman.
Pirtle, Dock.....	colored	Hardeman.....	Nov.	6, '83	1	Inman.
Scott, Neal.....	colored	Davidson.....	Nov.	8, '83	5	Inman.
Graham, Monday.....	colored	Shelby	Nov.	19, '83	1	Nashville.
Lee, John.....	white	Cocke.....	Nov.	12, '83	1	Coal Creek.
Wallace, D. E.....	white	Carter	Nov.	13, '83	5	Coal Creek.
James, W. J.....	white	Maury	Nov.	16, '83	2	Coal Creek.
Edwards, Henderson.....	colored	Lake.....	Nov.	12, '83	1	Inman.
Seymore, Cecil.....	colored	Maury	Nov.	16, '83	2	Inman.
Allen, James W.....	colored	Shelby	Nov.	21, '83	7	Nashville.
Jackson, Lee.....	colored	Davidson.....	Nov.	27, '83	3	Spence Farm.
Randolph, Burrell.....	colored	Rutherford....	Nov.	21, '83	1	Inman.
Scott, Jordan.....	colored	Tipton	Nov.	23, '83	1	Inman.
Foster, Frank.....	white	Davidson.....	Nov.	19, '83	10	Tracy City.
Hinds, Joe A.....	white	Roane.....	Nov.	12, '83	1	Tracy City.

NAMES OF PRISONERS DISCHARGED UNDER THE ACTS OF 1836 AND 1870,
FROM DECEMBER 1, 1882, TO DECEMBER 1, 1883.

NAME.	COLOR.	COUNTY.	WHEN DISCHARGED.	TERM SERV'D	DISCHARGED AT
Covington, Lindsey.....	colored	Davidson.....	Nov. 12, '83	10	Tracy City.
Clay, Dan	colored	Hamilton	Nov. 17, '83	1	Tracy City.
Miller, John.....	white	Roane	Nov. 12, '83	1	Tracy City.
Mills, John.....	white	Sullivan.....	Nov. 13, '83	4	Tracy City.
Patterson, Pleas.....	colored	Fayette.....	Nov. 17, '83	5	Tracy City.
Foster, Charlie.....	white	Hamilton.....	Nov. 17, '83	1	Tracy City.
Bostwick, Calvin.....	colored	Shelby... ..	Nov. 28, '83	3	Tracy City.
Dix, Nelson.....	colored	Montgomery..	Nov. 30, '83	3	Tracy City.
Johnson, George.....	colored	Williamson ..	Nov. 29, '83	12	Tracy City.
McNair, Simmon.....	colored	Davidson.....	Nov. 26, '83	5	Tracy City.
Ward, Jesse.....	colored	Bedford.	Nov. 27, '83	1	Tracy City.
Webb, Robt.....	colored	Bedford.....	Nov. 27, '83	1	Tracy City.
Newman, Mat.....	colored	Shelby	Nov. 27, '83	2	Inman.
Allison, Wm.....	colored	Bedford.....	Nov. 27, '83	1	Inman.
Webb, G. W.....	white	Dyer	Nov. 29, '83	3	Inman.
Williams, Peter.....	colored	Scott.....	Nov. 26, '83	5	Coal Creek.

NAMES OF PRISONERS DISCHARGED UNDER THE ACTS OF 1836 AND 1870,
FROM DECEMBER 1, 1883, TO DECEMBER 1, 1884.

NAMES.	COLOR.	COUNTY.	WHEN DISCHARGED.	TERM SERV'D	DISCHARGED AT
Leban, Alonzo	white	Davidson.....	Dec. 1, '83	3	Nashville.
Newton, Hugh.	white	Gibson.....	Dec. 1, '83	3	Nashville.
Burke, Wm.....	colored	Franklin.....	Dec. 1, '83	1½	Tracy City.
Gray, Ned.....	colored	Davidson.....	Dec. 6, '83	3	Nashville.
Bishop, J. S.....	white	Davidson.....	Dec. 7, '83	7	Nashville.
Pearsley, Vet.....	white	Jackson	Dec. 8, '83	2	Nashville.
Alsop, John.....	white	Henry	Dec. 8, '83	3	Nashville.
Looney, Tom.....	colored	Maury	Dec. 8, '83	3	Nashville.
Harris, Henry.....	colored	Shelby.....	Dec. 2, '83	3	Tracy City.
Wells, Henry.....	colored	Fayette.	Dec. 2, '83	10	Tracy City.
Lawrence, John.....	colored	Wilson	Dec. 4, '83	3	Tracy City.
Speed, Willis.....	colored	Sumner... ..	Dec. 10, '83	2	Nashville.
Clancy, Rich.....	white	Crockett.....	Dec. 11, '83	3	Nashville.
Rickman, John.....	colored	Trousdale	Dec. 3, '83	6	Inman.
Brown, Charlie.....	colored	Shelby	Dec. 3, '83	3	Inman.
Gullett, Jeff.....	colored	Shelby.....	Dec. 6, '83	1	Inman.
Barnes, Bob	colored	Davidson.....	Dec. 15, '83	2	Nashville.
Fayette, Batton.....	colored	Fayette.....	Dec. 15, '83	2	Nashville.
Bell, John.....	colored	Davidson	Dec. 17, '83	2	Spence Farm.
Harper, George.....	white	Shelby	Dec. 18, '83	1	Nashville.
Zachery, Mel	white	Davidson	Dec. 11, '83	10	Tracy City.

Stevenson, James.....	colored Davidson.....	Dec.	11, '83	10	Tracy City.
Mills, Mal.....	colored Rhea.....	Dec.	14, '83	3	Tracy City.
Glass, Henry.....	colored Davidson.....	Dec.	9, '83	3	Tracy City.
Dobbins, Dave.....	colored Davidson.....	Dec.	21, '83	1	Nashville.
Guin, Wm.....	white Johnson.....	Dec.	22, '83	2	Nashville.
Tucker, Calvin.....	colored Shelby.....	Dec.	22, '83	5	Nashville.
Sheppard, Babe.....	colored Davidson.....	Dec.	22, '83	4	Nashville.
Scott, Nelson.....	colored Davidson.....	Dec.	17, '83	3	Tracy City.
Partee, Louis.....	colored Lauderdale.....	Dec.	18, '83	7	Tracy City.
Hammel, Rob.....	colored Fayette.....	Dec.	16, '83	2	Inman.
Wright, John E.....	white Cannon.....	Dec.	22, '83	10	Coal Creek.
Loflin, Frank.....	colored Davidson.....	Jan.	1, '84	1	Nashville.
Dunton, Hord.....	colored Davidson.....	Dec.	29, '83	1	Nashville.
McKane, Jeff.....	colored Crockett.....	Dec.	31, '83	1	Nashville.
Williams, Harrison.....	colored Bedford.....	Dec.	27, '83	1	Tracy City.
Thompson, Mary.....	colored Davidson.....	Dec.	24, '83	1	Inman.
Love, Gabriel.....	colored Davidson.....	Jan.	2, '84	1	Nashville.
Puckett, Chas.....	colored Davidson.....	Jan.	2, '84	1	Nashville.
Rogers, George.....	white Shelby.....	Jan.	3, '84	1	Nashville.
Green, Charles.....	colored Shelby.....	Jan.	3, '84	1	Nashville.
Nichol, Osborne.....	colored Cocke.....	Dec.	30, '83	2	Coal Creek.
Hickerson, George.....	colored Hamilton.....	Jan.	1, '84	5	Tracy City.
Porter Wm.....	colored Davidson.....	Jan.	12, '84	1	Spence Farm.
Bird, Wm.....	white Monroe.....	Jan.	14, '84	5	Nashville.
Patterson, Frank.....	colored Davidson.....	Jan.	2, '84	4	Inman.
Howard, George.....	colored Henry.....	Jan.	15, '84	1	Spence Farm.
Edwards, Albert.....	colored Davidson.....	Jan.	12, '84	1	Inman.
Bondurant, John.....	white Wayne.....	Jan.	19, '84	5	Nashville.

NAMES OF PRISONERS DISCHARGED UNDER THE ACTS OF 1836 AND 1870,
FROM DECEMBER 1, 1883, TO DECEMBER 1, 1884.

NAMES.	COLOR.	COUNTY.	WHEN DISCHARGED.	TERM SERV'D	DISCHARGED AT
McKinley, George.....	colored	Hamilton..	Jan. 19, '84	3	Nashville.
James, Archie	colored	Davidson	Jan. 19, '84	1	Nashville.
Gibbs, Monroe.....	colored	Shelby	Jan. 19, '84	10	Nashville.
Larimore, Sam.....	white	Knox.....	Dec. 17, '83	3½	Coal Creek.
Diggs, Olie.....	colored	Davidson.....	Dec. 16, '83	2	Coal Creek.
Clay, Henry.....	colored	Greene.....	Dec. 15, '83	3	Coal Creek.
Williams, Ned	colored	Fayette.....	Dec. 16, '83	2	Coal Creek.
Huddlestone, Frank.....	colored	Roane	Jan. 13, '84	10	Tracy City.
Hill, Martin.....	colored	Shelby	Jan. 13, '84	10	Tracy City.
Mood, Lewis.....	colored	Shelby	Jan. 13, '84	4	Tracy City.
Ward, Houston.....	colored	Crockett.....	Jan. 16, '84	4	Tracy City.
Horney, Ed	colored	Davidson.....	Jan. 22, '84	1	Nashville.
Booker, N.	colored	Stewart..	Jan. 18, '84	2	Coal Creek.
Oliver, Perry.....	colored	Shelby	Jan. 15, '84	5	Inman.
Mathews, Lewis.....	colored	Crockett	Jan. 16, '84	4	Inman.
Johnson, Pearson	colored	Shelby....	Jan. 21, '84	10	Coal Creek.
Everson, Frank....	colored	Shelby	Jan. 21, '84	10	Tracy City.
Hunter, Gabe.....	colored	Shelby	Jan. 21, '84	10	Tracy City.
McLucas, Andy.....	colored	Hamilton	Jan. 21, '84	3	Tracy City.
Thomas, John Henry...	colored	Hamilton.....	Jan. 21, '84	3	Tracy City.
Harrison, Jerry.....	colored	Marshall	Jan. 21, '84	1	Inman.

Edwards, Lewis.....	white	Hardin.....	Jan.	'84	5	Inman.
Alexander, George	colored	Madison	Feb.	'84	1	Nashville.
Gooden, Hunter.....	colored	Fayette.....	Jan.	'84	3	Tracy City.
Killer, Joseph Taylor.....	white	Weakley.....	Feb.	'84	1	Nashville.
Sevier, Archie	colored	Hamilton.....	Jan.	'84	3	Tracy City.
Griffin, Jackson	colored	Knox.....	Feb.	'84	8	Coal Creek.
Hawkins, Floyd.....	colored	Shelby.....	Feb.	'84	1	Nashville.
Donnelly, James.....	white	Shelby.....	Feb.	'84	2	Inman.
Hall, John.....	colored	Madison.....	Feb.	'84	1	Inman.
Jones, John.....	white	Shelby	Feb.	'84	1	Nashville.
Addison, Henry.....	white	Shelby.....	Feb.	'84	1	Nashville.
Smith, Nat.....	colored	Obion.....	Feb.	'84	1	Tracy City.
Johnson, George.....	colored	Shelby	Feb.	'84	1	Tracy City.
Goodson, Mat.....	white	Marion.....	Feb.	'84	1	Tracy City.
Eddins, Ben.....	white	Giles.....	Feb.	'84	3	Tracy City.
Williams, Jake.	colored	Shelby.....	Feb.	'84	2	Tracy City.
Rickett, Sandy	colored	Shelby.....	Feb.	'84	1	Inman.
Robinson, Frank.....	colored	Shelby.....	Feb.	'84	3	Inman.
Lock, David.....	white	Hawkins	Feb.	'84	2	Nashville.
Hines, Wilsen.....	colored	Lincoln.....	Feb.	'84	1	Tracy City.
Andrews, Wm.....	colored	Davidson.....	Feb.	'84	10	Tracy City.
Mann, Bill.....	colored	Haywood.....	Feb.	'84	1	Tracy City.
Robertson, Lewis.....	colored	Dickson.....	Feb.	'84	1	Inman.
Pool, Moss.....	colored	Tipton.....	Feb.	'84	2	Inman.
Galloway, Malinda	white	Davidson.....	Feb.	'84	2	Nashville.
Morman, Thos.....	colored	Davidson.....	Feb.	'84	1	Spence Farm.
May, Frank	colored	Hardeman.....	Feb.	'84	1	Nashville.
Rock, E. L.	white	Hardeman.....	Feb.	'84	1	Nashville.

NAMES OF PRISONERS DISCHARGED UNDER THE ACTS OF 1836 AND 1870,
FROM DECEMBER 1, 1883, TO DECEMBER 1, 1884.

NAMES.	COLOR.	COUNTY.	WHEN DISCHARGED.	TERM SERV'D	DISCHARGED AT
Bonner, Mitch.....	colored	Lincoln.....	Feb. 27, '84	1	Tracy City.
McCorry, Rome.....	colored	Madison.....	Feb. 29, '84	1½	Tracy City.
Robinson, Sam.....	colored	Gibson.....	Feb. 29, '84	1	Tracy City.
Brown, John.....	colored	Obion.....	Feb. 29, '84	1	Tracy City.
MacDaniel, Chas.....	colored	Obion.....	Feb. 29, '84	1	Tracy City.
Tate, Jas.....	colored	Blount.....	March 1, '84	7	Coal Creek.
May, John.....	white	Crockett.....	March 6, '84	10	Nashville.
Frampton, John.....	colored	Shelby.....	March 2, '84	10	Tracy City.
Hendrix, Charles.....	white	Shelby.....	March 6, '84	3	Tracy City.
Steppe, Brack.....	white	Fentress.....	March 4, '84	1	Coal Creek.
Gaines, Geo.....	colored	Sullivan.....	March 11, '84	1	Coal Creek.
Tippins, Sidney.....	colored	Hamblen.....	March 11, '84	1	Coal Creek.
Houston, Cornelius.....	colored	Shelby.....	March 13, '84	1	Tracy City.
Whiteside, Farris.....	colored	Shelby.....	March 14, '84	1	Tracy City.
Cannon, James.....	white	Tipton.....	March 20, '84	3	Nashville.
Robb, Goodman.....	colored	Rutherford.....	March 18, '84	1	Tracy City.
Garner, Adam.....	colored	Rutherford.....	March 18, '84	1	Tracy City.
Sanders, Wesley.....	colored	Rutherford.....	March 18, '84	1	Tracy City.
Gannaway, Tom.....	colored	Bedford.....	March 19, '84	1	Tracy City.
Harrison, Greer.....	colored	Bedford.....	March 19, '84	1	Tracy City.
Cabins, Adam.....	white	Rutherford.....	March 18, '84	1	Tracy City.

Stamps, Tom.....	colored	Bedford.....	March 19, '84	1	Tracy City.
Hunt, Robt	colored	Hamilton	March 21, '84	3	Tracy City.
Ewing, Mann.....	colored	Obion	March 17, '84	1	Inman.
Randolph, Thos.....	white	Putnam	March 16, '84	2	Inman.
Tharpe, Wm.....	colored	Henry.....	March 17, '84	2	Inman.
Menifee, Caesar..	colored	Rutherford..	March 18, '84	1	Inman.
Litford, Allen	colored	Tipton.....	March 21, '84	3	Inman.
Green, Willis.....	white	Greene.....	March 22, '84	10	Inman.
McCowan, Robt.....	colored	Hardeman.....	March 29, '84	5	Nashville.
Evans, Charles.....	white	Shelby	March 31, '84	3	Nashville.
Benett, Geo.....	colored	Shelby	March 28, '84	3	Inman.
Crump, Charlie.....	colored	Hardin.	April 5, '84	3	Nashville.
Chapman, Alex.....	white	Knox.....	April 12, '84	3	Nashville.
Boxley, Abe.....	colored	Dickson.....	April 12, '84	3	Nashville.
Montgomery, Abe.....	colored	Haywood.....	April, 12, '84	6	Nashville.
Simms, Jim.....	colored	Hardin.....	April 6, '84	3	Tracy City.
Hunt, Tom.....	colored	Rutherford...	April 10, '84	5	Tracy City.
Cheatham, Dick.....	colored	Davidson.....	April 12, '84	3	Inman.
Madgett, Thos.....	colored	Knox.....	April 11, '84	3	Coal-Creek.
Burns, Wm.....	white	Weakley	April 21, '84	3	Nashville.
Pursley, Frank.....	white	Putnam	April 13, '84	3	Tracy City.
Jones, Haywood.....	colored	Crockett	April 14, '84	3	Tracy City.
Dismukes, Haywood.....	colored	Shelby	April 17, '84	1	Tracy City.
Kelly, Tom.....	colored	Weakley	April 22, '84	3	Tracy City.
Thompson, Henry.....	colored	Weakley	April 22, '84	3	Tracy City.
Williams, George.....	colored	Bradley.	April 22, '84	1	Tracy City.
Botton, Ben.....	colored	Tipton.....	April 22, '84	4	Tracy City.
Green, Joe.....	colored	Franklin	April 23, '84	1½	Tracy City.

**NAMES OF PRISONERS DISCHARGED UNDER THE ACTS OF 1836 AND 1870,
FROM DECEMBER 1, 1883 TO DECEMBER 1, 1884.**

NAME.	COLOR.	COUNTY.	WHEN DISCHARGED.	TERM SERV'D	DISCHARGED AT
Phelps, Jerry.....	colored	Sequatchie.....	April 25, '84	3	Tracy City.
Thompson, Thomas.....	colored	Hardeman.....	April 26, '84	10	Tracy City.
St. Clair, J. C.....	white	Shelby	April 28, '84	1	Nashville.
Wray, Alice.....	colored	Davidson.....	May 1, '84	3	Nashville.
Foster, John W.....	white	Madison	May 2, '84	3	Nashville.
Martin, Ike.....	colored	Madison	May 2, '84	3	Nashville.
Taylor, Raleigh.....	colored	Fayette.....	May 2, '84	3	Nashville.
Sanders, Jim.....	colored	Davidson.....	May 3, '84	8	Nashville.
Ballentine, Joseph.....	colored	Giles.....	May 3, '84	2	Nashville.
Hamlet, Peter.....	colored	Davidson.....	April 28, '84	4	Tracy City.
Anderson, Rand.....	colored	Shelby.....	April 29, '84	1	Tracy City.
Kelly, Tom.....	white	Shelby	April 30, '84	1	Tracy City.
Jones, Mary.....	colored	Shelby.....	April 27, '84	1	Tracy City.
Williams, Sam.....	colored	Shelby... ..	May 2, '84	5	Tracy City.
Drake, Cage.....	colored	Madison	May 3, '84	3	Tracy City.
Ingraham, Aaron.....	colored	Madison	May 3, '84	3	Tracy City.
Marcum, Ervin.....	white	Fentress	May 1, '84	2	Coal Creek.
Mullins, Henderson.....	white	Hancock	May 1, '84	1	Coal Creek.
Haynes, Chas.....	white	Hancock	May 1, '84	1	Coal Creek.
Thomas, T. G	white	Shelby... ..	May 8, '84	4	Nashville.
Neal, Elijah.....	white	DeKalb	May 10, '84	3	Nashville.

Wallace, William.....	colored	Shelby.....	May	16, '84	5	Nashville.
Gorison, Geo.....	white	Knox.....	May	5, '84	1	Tracy City.
Hutton, G. W.....	white	Sullivan.....	May	7, '84	6	Tracy City.
Collins, John.....	white	Greene.....	May	15, '84	1	Coal Creek.
Hitton, J. P.....	white	Hawkins.....	May	18, '84	1	Coal Creek.
Ward, William..	colored	Shelby.....	May	6, '84	3	Inman.
Hughes, Fred...	colored	Maury.....	May	12, '84	1	Inman.
Spear, Alex.....	colored	Wayne.....	May	12, '84	1	Inman.
Jones, Gabe.....	colored	Davidson.....	May	16, '84	1	Inman.
Brown, Andy.....	colored	Hamilton..	May	12, '84	2	Tracy City.
Holmes, Martin.....	colored	Hamilton.....	May	12, '84	2	Tracy City.
Payne, Will.....	colored	Hamilton.....	May	12, '84	2	Tracy City.
Grigsby, Ned.....	colored	Maury.....	May	12, '84	1	Tracy City.
Allen, Jim.....	colored	Maury.....	May	16, '84	4	Tracy City.
Bynard, Adrian.....	white	Tipton.....	May	21, '84	5	Nashville.
Bynard, Francis.....	white	Tipton.....	May	21, '84	5	Nashville.
Morgan, Jessie.....	colored	Morgan.....	May	24, '84	10	Nashville.
Walker, Rob.....	colored	Tipton.....	May	21, '84	5	Tracy City.
Bonner, Jake.....	colored	Hamilton.....	May	22, '84	1	Tracy City.
Davis, Joe.....	colored	Hamilton.....	May	22, '84	1	Tracy City.
Johnson, Lewis.....	colored	Campbell.....	May	27, '84	3	Nashville.
Lee, William.....	colored	Hamilton.....	May	22, '84	1	Inman.
Moses, Dave.....	colored	Haywood.....	May	31, '84	1	Nashville.
Johnson, George.....	colored	Shelby...	May	28, '84	10	Tracy City.
Richardson, Levy.....	white	White.....	May	29, '84	1	Tracy City.
Jackson, Henry.....	colored	Hamilton.....	June	1, '84	3	Inman.
Berry, John.....	white	Shelby.....	June	5, '84	1	Nashville.
Hall, W. R.....	white	Hardeman.....	June	9, '84	3	Nashville.

NAMES OF PRISONERS DISCHARGED UNDER THE ACTS OF 1836 AND 1870,
FROM DECEMBER 1, 1883, TO DECEMBER 1, 1884.

NAMES.	COLOR.	COUNTY.	WHEN DISCHARGED.	TERM SERV'D	DISCHARGED AT
Fulton, Frank.....	colored	Sumner.....	June 4, '84	1	Inman.
Ratliffe, Babe.....	white	Maury.....	June 10, '84	5	Nashville.
Heathcoat, Rufus.....	white	Franklin.....	June 11, '84	3	Nashville.
Hendry, Joseph.....	white	Greene.....	June 14, '84	1½	Nashville.
Foster, Sam.	colored	Shelby.....	June 12, '84	3	Tracy City.
Tucker, James.....	white	Monroe.....	June 12, '84	2	Tracy City.
Weaver, Henry.....	white	Anderson.....	June 11, '84	1	Coal Creek.
Gillespie, Link.....	colored	Carter.....	June 12, '84	1	Coal Creek.
Benny, J. W.....	white	Knox.....	June 10, '84	6	Inman.
Johnson, George.....	colored	Putnam.....	June 20, '84	5	Nashville.
Douglass, Eliza.....	colored	Dyer.....	June 21, '84	2	Nashville.
Edwards, Burt.....	colored	McMinn.....	June 17, '84	7	Tracy City.
Smith, Ella.....	colored	Knox.....	June 17, '84	6	Tracy City.
Harris, Dodd.....	colored	Shelby.....	June 21, '84	3	Tracy City.
West, Ben.....	colored	Chester.....	June 19, '84	2	Inman.
Garner, Allen.....	colored	Blount.....	June 15, '84	4½	Coal Creek.
Smith, Arthur.....	white	Carter.....	June 20, '84	1	Coal Creek.
Carter, Calvin.....	colored	Giles.....	June 24, '84	3	Tracy City.
Davis, Sol.....	colored	Shelby.....	June 24, '84	3	Tracy City.
Coleman, Pete.....	colored	Shelby.....	June 24, '84	3	Tracy City.
Green, Alex.....	colored	Shelby.....	June 24, '84	3	Tracy City.

Thompson, Will	colored	Lincoln	June	25, '84	1	Tracy City.
Hooper, Allen.....	colored	Shelby.	June	26, '84	4	Inman.
Burton, Harry.....	white	Davidson.....	June	29, '84	10	Inman.
Brown, Frank.....	colored	Cocke.	June	27, '84	1	Coal Creek.
Cureton, Sam.....	colored	Cocke.	June	27, '84	1	Coal Creek.
Thompson, Lewis.....	colored	Knox.....	July	1, '84	4	Tracy City.
Davis, Marion.....	white	James	July	3, '84	2	Tracy City.
Moore, Mike.....	colored	James	July	3, '84	2	Tracy City.
Forbes, Wills.....	colored	Hardeman....	July	1, '84	1	Inman.
Thomas, Sarah.....	colored	Davidson.....	July	14, '84	6	Nashville.
Bates, Will.....	colored	Overton.....	July	13, '84	1	Inman.
Davidson, Allen.....	colored	Knox.....	July	19, '84	2	Coal Creek.
Miller, Tom.....	colored	Davidson.....	July	13, '84	3	Tracy City.
Hoggett, John.....	colored	Davidson.....	July	16, '84	3	Tracy City.
Johnson, Archie.....	colored	Tipton.....	July	18, '84	3	Tracy City.
Ripley, Wm.....	white	Shelby.	July	25, '84	2	Nashville.
Taylor, Wm.....	colored	Williamson ...	July	26, '84	5	Nashville.
Williamson, Wm.....	white	Decatur	July	26, '84	10	Nashville.
Stegall, John.....	colored	McNairy.....	July	20, '84	3	Tracy City.
Cason, Kern.....	colored	McNairy	July	20, '84	3	Tracy City.
Dean, George.....	colored	McNairy.....	July	20, '84	3	Tracy City.
Debow, Jack.....	colored	Davidson.....	July	20, '84	3	Tracy City.
Debow, Shap.....	colored	Davidson.....	July	20, '84	3	Tracy City.
Lea, Sam.....	colored	Roane	July	20, '84	1	Tracy City.
Flac, Jim.....	colored	Bedford.....	July	24, '84	1	Tracy City.
Milan, R. C.....	colored	Bedford.....	July	24, '84	1	Tracy City.
Parker, Henry.....	colored	Bedford.....	July	24, '84	1	Tracy City.
Amos, Henry.....	colored	Bedford.....	July	24, '84	1	Tracy City.

NAMES OF PRISONERS DISCHARGED UNDER THE ACTS 1836 AND 1870,
FROM DECEMBER 1, 1883, TO DECEMBER 1, 1884.

NAME.	COLOR.	COUNTY.	WHEN DISCHARGED.	TERM SERV ² D	DISCHARGED AT
Freeman, Ed.....	colored	Bedford	July 26, '84	1	Tracy City.
Lanier, Hum	colored	Davidson	July 24, '84	3	Inman.
Napier, John	colored	Davidson	July 30, '84	2	Nashville.
Bounds, Noah	colored	Wilson	July 27, '84	3	Tracy City.
Adams, James	colored	Shelby	July 28, '84	3	Tracy City.
Garren, Chas.....	white	McMinn	July 29, '84	1	Tracy City.
Williams, James.....	colored	Lauderdale	Aug. 9, '84	3	Nashville.
McBrooks, James.....	white	Davidson	Aug. 7, '84	3	Tracy City.
Thompson, Sam.....	colored	Fayette	Aug. 12, '84	10	Nashville.
Malon, George.....	colored	Davidson	Aug. 13, '84	3	Nashville.
Smith, Silas.....	colored	Knox	Aug. 7, '84	10	Coal Creek.
Bonderman, William	colored	Maury	Aug. 15, '84	3	Nashville.
Dulsnay, Henderson.....	white	Greene	Aug. 16, '84	3	Nashville.
Richmond, Wes.....	colored	Robertson	Aug. 16, '84	3	Spence Farm.
Carter, Alex.....	colored	Houston	Aug. 16, '84	3	Nashville.
Floyd, Thomas	colored	Cannon	Aug. 19, '84	3	Nashville.
Works, Ed.....	colored	Davidson	Aug. 22, '84	4	Nashville.
Ashford, Sam.....	colored	Davidson	Aug. 23, '84	6	Nashville.
Wright, Mason	colored	Shelby	Aug. 11, '84	2	Tracy City.
Cooper, John.....	colored	Madison	Aug. 14, '84	10	Tracy City.
Moore, Fannie.....	colored	Maury	Aug. 16, '84	3	Tracy City.

Lee, John.....	colored	Davidson.....	Aug.	16, '84	3	Tracy City.
Holland, Tom.....	colored	Shelby.....	Aug.	17, '84	1	Tracy City.
Bennett, George.....	colored	Shelby.....	Aug.	18, '84	1	Tracy City.
Eberly, Carolina.....	white	Shelby.....	Aug.	17, '84	1	Tracy City.
Smith, Joe.....	white	Knox.....	Aug.	20, '84	3	Tracy City.
Gilbert, John.....	colored	Knox.....	Aug.	20, '84	3	Tracy City.
Cherry, Sandy.....	colored	Dyer.....	Aug.	22, '84	1	Tracy City.
Petty, Pryor.....	colored	Tipton.....	Aug.	22, '84	1	Tracy City.
Finegan, Mike.....	white	Shelby.....	Sept.	1, '84	3	Tracy City.
Hill, Gilbert.....	colored	Washington ..	Aug.	18, '84	1½	Coal Creek.
Miller, Wm.....	white	Knox.....	Aug.	20, '84	3	Coal Creek.
Williams, Jessie.....	colored	Knox.....	Aug.	20, '84	3	Coal Creek.
Paris, Tennessee	colored	Sevier.....	Aug.	25, '84	2	Coal Creek.
Johnson, Charlie.....	colored	Madison.....	Aug.	27, '84	3	Coal Creek.
Bush, Anderson.....	colored	Hamilton.....	Aug.	26, '84	3	Tracy City.
Glasbey, Wm.....	colored	Hardeman.....	Sept.	6, '84	2	Spence Farm.
Strong, Maria.....	colored	Hardeman.....	Sept.	6, '84	2	Spence Farm.
Winburn, Willie.....	colored	Crockett	Sept.	6, '84	1	Nashville.
Brown, Wm.....	colored	Warren.....	Sept.	1, '84	1	Tracy City.
Stanford, Wm.....	colored	Sumner.....	Sept.	10, '84	3	Nashville.
Lacy, Wm.....	white	Davidson.....	Sept.	11, '84	1	Nashville.
Peebles, Henry.....	colored	Fayette.....	Sept.	15, '84	3	Nashville.
Drake, Henry.....	colored	Maury.....	Sept.	9, '84	6	Tracy City.
Jones, Pete.....	colored	Robertson.....	Sept.	9, '84	1	Tracy City.
Latimer, John.....	colored	Sumner.....	Sept.	11, '84	3	Inman.
Lawhorne, Sarah.....	white	Knox.....	Sept.	6, '84	4	Coal Creek.
Mitchel, Anderson	colored	Hawkins	Sept.	13, '84	1	Coal Creek.
Parker, Nathan.....	white	Stewart.....	Sept.	20, '84	2	Nashville.

NAMES OF PRISONERS DISCHARGED UNDER THE ACTS OF 1836 AND 1870,
FROM DECEMBER 1, 1883, TO DECEMBER 1, 1884.

NAMES.	COLOR.	COUNTY.	WHEN DISCHARGED.	TERM SERV'D	DISCHARGED AT
Johnson, W. W.....	white	Henderson....	Sept. 22, '84	3	Nashville.
Davis, Marion.....	colored	Laureddale ...	Sept. 15, '84	1	Tracy City.
Jackson, Wm.....	colored	Shelby	Sept. 15, '84	3	Tracy City.
Smart, Henry.....	white	Hamblien.....	Sept. 16, '84	1	Tracy City.
Martin, Riley.....	colored	Hamilton.....	Sept. 17, '84	2	Tracy City.
Ellis, J. T.....	white	Putnam.....	Sept. 15, '84	1	Inman.
Gilbert, Alex.....	colored	Giles.....	Sept. 15, '84	2½	Coal Creek.
Samuels, Frank.....	colored	Fayette.....	Sept. 16, '84	3	Coal Creek.
Roark, John.....	white	James.....	Sept. 16, '84	1	Coal Creek.
Evans, Charlie.....	colored	Shelby	Sept. 18, '84	15	Inman.
Dickerson, Bud.....	colored	Davidson.....	Sept. 29, '84	5	Nashville.
Beaumont, Wm.....	colored	Shelby	Sept. 22, '84	6	Tracy City.
Moore, Major.....	colored	Shelby	Sept. 23, '84	1	Tracy City.
Reeves, Wesley.....	colored	Shelby	Sept. 23, '84	1	Tracy City.
Redmond, Rosa.....	colored	Shelby	Sept. 23, '84	1	Tracy City.
Burke, John.....	white	Shelby	Sept. 25, '84	1	Tracy City.
Biddle, Thomas.....	colored	Franklin	Sept. 27, '84	2	Tracy City.
Castelman, Louis.....	colored	Bedford	Sept. 27, '84	2	Tracy City.
Shelby, Charlie.....	colored	Montgomery..	Sept. 21, '84	2	Inman.
Brown, E. M.....	white	Fentress.....	Oct. 2, '84	3	Nashville.
Fisher, John B.....	white	Smith.....	Oct. 3, '84	2	Nashville.

McLanahan, George.....	colored	Gibson.....	Oct.	4, '84	3	Nashville.
Shankle, Jacob.....	white	Sullivan.....	Oct.	4, '84	3	Nashville.
Warren, Henry.....	colored	Fayette.....	Oct.	2, '84	1	Inman.
Riddle, Tom.....	colored	Hardeman ..	Oct.	3, '84	3	Coal Creek.
Sanders, Wm.....	colored	Davidson.....	Sept.	30, '84	5	Tracy City.
Sleyden, Tom.....	white	Humphreys. ..	Oct.	3, '84	3	Tracy City.
Thomas, Will.....	colored	Hamilton.....	Oct.	11, '84	3	Inman.
Dye, Wilson.....	colored	Sumner	Oct.	7, '84	1	Tracy City.
Ruffian, R.....	white	Weakley.....	Oct.	8, '84	1	Tracy City.
Brown, Alf.....	colored	Giles.....	Oct.	11, '84	3	Tracy City.
Regan, Bill.....	colored	Giles.....	Oct.	11, '84	3	Tracy City.
Humphries, Grant.....	colored	Davidson.....	Oct.	15, '84	2	Nashville.
Schaefer, George.....	white	Carroll.....	Oct.	16, '84	2	Nashville.
Boyce, D. C.....	white	Davidson.....	Oct.	17, '84	5	Nashville.
Smith, Joe.....	white	Rutherford ..	Oct.	16, '84	3	Nashville.
Hudson, Lafayette.....	colored	Davidson.....	Oct.	17, '84	2	Nashville.
Myers, Lewis.....	colored	Bedford.....	Oct.	17, '84	3	Spence Farm.
Hodge, James.....	colored	Dyer.....	Oct.	17, '84	2	Spence Farm.
Harvey, John	colored	Shelby	Oct.	13, '84	5	Tracy City.
Russell, John.....	white	Rhea	Oct.	13, '84	1	Tracy City.
Jakes, Minos.....	colored	Bedford.....	Oct.	15, '84	3	Tracy City.
Upton, Albert.....	colored	Hamilton.....	Oct.	17, '84	3	Tracy City.
Edwards, Granville.....	colored	Hamilton.....	Oct.	17, '84	3	Tracy City.
Brown, James.....	colored	Shelby.....	Oct.	22, '84	2	Nashville.
McGhee, Franklin.....	white	Knox.....	Oct.	24, '84	10	Nashville.
Stott, J. W.....	white	Gibson.....	Oct.	25, '84	3	Nashville.
Land, C. T.....	white	Gibson.....	Oct.	25, '84	3	Nashville.
Jones, Potts.....	colored	Shelby.....	Oct.	9, '84	10	Coal Creek,

NAMES OF PRISONERS DISCHARGED UNDER THE ACTS OF 1836 AND 1870,
FROM DECEMBER 1, 1883 TO DECEMBER 1, 1884.

NAME.	COLOR.	COUNTY.	WHEN DISCHARGED.	TERM SERV'D	DISCHARGED AT
Gordon, Rollins.....	colored	Shelby	Oct. 9, '84	10	Coal Creek.
Roberts, George.....	white	Sevier	Oct. 22, '84	1	Coal Creek.
Mallaby, Wm.....	white	Campbell.....	Oct. 25, '84	1	Coal Creek.
Brown, James.....	colored	Hamilton.....	Oct. 19, '84	3	Tracy City.
Charlton, Tom.....	colored	Davidson.....	Oct. 20, '84	2	Tracy City.
Hill, Jordan.....	colored	Davidson.....	Oct. 19, '84	1	Tracy City.
Cannon, Henry.....	colored	Shelby	Oct. 23, '84	2	Tracy City.
Turlington, John.....	white	Obion.....	Nov. 5, '84	3	Nashville.
Kounce, Joe.....	white	Shelby	Oct. 26, '84	1½	Inman.
Pike, Samuel.....	white	McMinn.....	Oct. 28, '84	3	Inman.
Stokes, Jerry.....	colored	Carroll.....	Oct. 27, '84	10	Coal Creek.
McCluer, Sam.....	colored	Jackson.	Oct. 26, '84	10	Tracy City.
Burke, Joe.....	colored	Franklin	Oct. 27, '84	2	Tracy City.
Neeley, Sam.....	colored	Lincoln.....	Oct. 28, '84	1	Tracy City.
McDowell, Charles.....	colored	Davidson.....	Oct. 27, '84	1	Tracy City.
Edmondson, Bud.....	colored	Davidson.....	Oct. 27, '84	1	Tracy City.
Mitchell, Henry.....	colored	Davidson.....	Nov. 1, '84	10	Tracy City.
Davis, Willis.....	colored	Lauderdale....	Nov. 10, '84	2	Nashville.
Roberts, Henry.....	colored	Shelby	Nov. 1, '84	10	Spence Farm.

Waller, Lee.....	white	Roane...	Nov.	12, '84	4	Nashville.
Wheatley, Sam.....	colored	Chester	Nov.	12, '84	1	Nashville.
Garrett, Creed.....	white	Pickett	Nov.	13, '84	1	Nashville.
Shannon, Chas.....	white	Davidson.....	Nov.	13, '84	6	Nashville.
Huggins, Abe.....	colored	Shelby	Nov.	2, '84	10	Coal Creek.
Mitchell, Eugene.....	colored	Hamblen.....	Nov.	3, '84	4	Coal Creek.
Sams, Jackson.....	white	Sullivan.....	Nov.	7, '84	1	Coal Creek.
Walker, Albert.....	colored	Rutherford....	Nov.	4, '84	4	Tracy City.
Thompson, Elias.....	colored	Gibson.....	Nov.	5, '84	1	Tracy City.
Westbrooks, Sam.....	colored	Obion.....	Nov.	6, '84	1	Tracy City.
Johnson, Phil.....	colored	Shelby.....	Nov.	12, '84	1	Tracy City.
Elliot, Peter.....	colored	Davidson.....	Nov.	15, '84	3	Nashville.
Turner, John.....	white	Davidson	Nov.	15, '84	3	Nashville.
Stitt, Wm.....	white	Dickson.....	Nov.	17, '84	6	Nashville.
Penn, Allen	colored	Shelby.....	Nov.	10, '84	1	Tracy City.
Patrick, Wm.....	colored	Shelby.....	Nov.	10, '84	1	Tracy City.
Williams, Mollie.....	colored	Davidson.....	Nov.	19, '84	3	Nashville.
Earhart, Mose.....	colored	Stewart.....	Nov.	22, '84	1	Nashville.
Talley, Geo. W.....	colored	Stewart.....	Nov.	22, '84	1	Nashville.
Davis, Henry.....	colored	Davidson.....	Nov.	22, '84	3	Nashville.
House, Wash.....	colored	Davidson.....	Nov.	19, '84	5	Tracy City.
Bridgeman, Joe.....	colored	Knox.....	Nov.	17, '84	3	Coal Creek.
Sherrell, George.....	colored	Tipton	Nov.	20, '84	3	Coal Creek.
McGill, Henry.....	colored	Rutherford....	Nov.	26, '84	1	Nashville.
Johnson, Randal.....	colored	Davidson.....	Nov.	27, '84	3	Nashville.
Montgomery, James.....	white	James	Nov.	24, '84	3	Tracy City.
Wilson, Richard.....	colored	Shelby.....	Nov.	29, '84	3	Tracy City.

NAMES OF PRISONERS DISCHARGED UNDER THE ACTS OF 1836 AND 1870,
FROM DECEMBER 1, 1883, TO DECEMBER 1, 1884.

NAME.	COLOR.	COUNTY.	WHEN DISCHARGED.	TERM SERV'D	DISCHARGED AT
Edmondson, Henry.....	colored	Shelby	Nov. 27, '84	3	Coal Creek.
Sneed, Wm.....	colored	Hamblen ...	Nov. 29, '84	1	Coal Creek.
Hilton, Dan.....	white	Davidson.....	Nov. 6, '84	3	Inman.
Sturdevant, Will.....	colored	Montgomery..	Nov. 7, '84	1	Inman.
Prisoners discharged from December 1, 1882, to December 1, 1883.....					408
Prisoners discharged from December 1, 1883, to December 1, 1884.....					393
Grand total.....					801

NAMES OF PRISONERS DISCHARGED ON FULL TIME,

FROM DECEMBER 1, 1882, TO DECEMBER 1, 1884.

NAMES.	COLOR.	COUNTY.	WHEN DISCHARGED.	TERM SERV'D	DISCHARGED AT
Henry, James.....	colored	Knox.....	Dec. 4, '82	1½	Coal Creek.
Whitfield, Laura.....	colored	Shelby.....	Dec. 26, '82	3	Ensley's Farm.
Coleman, Ben.....	colored	McMinn.....	Dec. 27, '82	7	Tracy City.
Watson, Clarence.....	colored	Montgomery..	Jan. 5, '83	1	Hatton.
Franklin, G., alias, Greenfield, Wat.....	colored	Davidson.....	Feb. 8, '83	4	Nashville.
Moore, Henry.....	colored	Davidson.....	Feb. 3, '83	1	Tracy City.
Houghton, Calvin.....	colored	Madison ..	March 3, '83	1	Nashville.
Campbell, Jacob.....	white	Hamblen.....	Dec. 10, '82	1	Coal Creek.
Jones, Lewis.....	colored	Shelby ..	March 2, '83	1	Ensley's Farm.
Habershaw, Cordelia.....	colored	Davidson.....	March 28, '83	1	Nashville.
Wade, Henry.....	colored	Davidson.....	March 25, '83	10	Ensley's Farm.
Carter, John.....	colored	Madison.....	April 9, '83	7	Coal Creek.
Ewing, Jim.....	colored	Gibson.....	April 17, '83	4	Tracy City.
Stacy, Charlie.....	colored	Madison.....	May 26, '83	4	Ensley's Farm.
Humphries, Mose.....	colored	Hardeman.....	Aug. 2, '83	7	Ensley's Farm.
Williams, Thomas.....	white	Gibson. .	Dec. 13, '83	2	Tracy City.
Williams, Harrison.....	colored	Bedford.	Dec. 27, '83	1	Tracy City.
Ellison, George.....	white	Sevier.....	March 6, '84	3	Tracy City.
Kirby, Wm.....	white	McMinn.....	March 27, '84	2	Tracy City.

NAMES OF PRISONERS DISCHARGED ON FULL TIME.

FROM DECEMBER 1, 1882, TO DECEMBER 1, 1884.

NAMES.	COLOR.	COUNTY.	WHEN DISCHARGED.	TERM SERV'D	DISCHARGED AT
Thompson, John.....	colored	Hamblen	April 26, '84	3	Tracy City.
Wedge, F. L.....	white	Grainger.....	May 4, '84	3	Tracy City.
Holder, Will.....	colored	Shelby	May 23, '84	6	Tracy City.
Williams, Thomas.....	colored	Marshall.....	June 9, '84	6	Inman.
Nathan, Charlie.....	white	Henry	June 21, '84	1	Tracy City.

**CONVICT RECORD, SHOWING NUMBER OF PRISONERS THAT DIED AT TRACY CITY,
FROM DECEMBER 1, 1882, TO DECEMBER 1, 1884.**

COUNTY.	NAMES.	COLOR.	CAUSE OF DEATH.	DATE OF DEATH.	DATE OF RECEPTION.
Tipton	King, Tom.....	colored	Killed attempting to escape.	Jan. 9, '83	Jan. 18, '82
Warren.....	Malone, Hatton.....	colored	Killed by falling of slate.....	Feb. 15, '83	Jan. 24, '83
Moore	Flack, Isaac.....	colored	Consumption.....	April 26, '83	Jan. 23, '82
Shelby	Brown, Henry.....	colored	Fever	June 1, '83	Sept. 21, '82
Davidson.....	Lanier, Gilbert.....	colored	Killed by falling of rocks.....	June 22, '83	Jan. 13, '81
Bedford.....	Burrows, Ben	colored	Typhoid Fever.....	July 14, '83	Dec. 27, '82
Knox.....	Parker, James.....	white	Pneumonia.. ..	July 9, '83	Oct. 18, '80
Davidson.....	Brooks, Mose.....	colored	Cancer on hand.. ..	Aug. 2, '83	June 11, '82
James.....	Halloway, Preston.....	colored	Fever	Sept. 2, '83	Oct. 3, '82
Wilson.....	Seay, Allen.....	colored	Killed in attempting to escape.....	Sept. 4, '83	Jan. 27, '82
Bradley.....	Bailey, James.....	white	Chronic Diarrhea.....	Oct. 20, '83	May 22, '83
Davidson.....	Prewitt, Joe.....	white	Chronic Diarrhea.....	Nov. 9, '83	March 29, '83
Shelby	Jones, Henry.....	colored	Dropsy.....	Nov. 18, '83	Oct. 23, '83
Rutherford...	Lytle, Simon.....	colored	Consumption	Dec. 1, '83	Aug. 22, '82
Hawkins...	King, John.....	white	Consumption	Dec. 1, '83	.....
Lauderdale...	Hale, Absalom.....	colored	Puerpeura.....	Dec. 4, '83	.....
Davidson.....	King, James.....	white	Dropsy	Jan. .., '84	Oct. 27, '82
Shelby	Cleaves, Ben.....	colored	Consumption.....	Jan. .., '84	Sept. 22, '81
Hardeman.....	Rogan, George.....	colored	Killed by falling of slate in mines	Jan. 28, '84	Dec. 10, '81
Shelby	Walls, George.....	colored	Diarrhea.....	Feb. 12, '84	May 16, '82
Weakley.....	Bell, Dow.....	colored	Dropsy	Feb. 18, '84	Nov. 8, '83

**CONVICT RECORD, SHOWING NUMBER OF PRISONERS THAT DIED AT TRACY CITY,
FROM DECEMBER 1, 1882, TO DECEMBER 1, 1884.**

COUNTY.	NAMES.	COLOR.	CAUSE OF DEATH.	DATE OF DEATH.	DATE OF RECEPTION.
Fayette.....	Anderson, Connel.....	colored	Consumption.....	Feb. 29, '84	March 16, '82
Madison	Craig, John Wesley.....	colored	Chronic Diarrhea.....	March 4, '84	Oct. 29, '82
Shelby..	Strickland, Wm.	colored	Diarrhea.....	March 21, '84	Oct. 23, '83
Gibson.	Chapman, Isaac.....	colored	Consumption.....	March 21, '84	Dec. 5, '83
Hardeman.....	Wilson, Frank.....	colored	Consumption.....	March 24, '84	Dec. 10, '81
Monroe.....	Miller, George.....	white	Diarrhea.....	March 30, '84	Jan. 11, '82
Shelby	Brooks, Sidney.....	colored	Consumption.....	April 4, '84	May 15, '83
Hamilton.....	Fayne, Shade.....	colored	Consumption.....	April 3, '84	Oct. 18, '83
Fayette.. ..	Weatherly, Alexander..	colored	Consumption.....	April 1, '84	July 8, '83
Shelby.....	Russ, Thomas.....	colored	Consumption.. ..	April 10, '84	Sept. 17, '82
Marion.....	Frishy, Wm.	white	Diarrhea.....	April 12, '84	Nov. 10, '82
Davidson.....	Galloway, Dave.	colored	Dropsy.....	April 13, '84	May 31, '82
Hamilton	Crutchfield, Asa.....	colored	Consumption.....	April 14, '84	Oct. 18, '83
Weakley	Aston, George.....	white	Consumption.....	April 18, '84	March 6, '83
Montgomery ..	Elam, Pierce.....	colored	Dropsy.....	April 22, '84	March 4, '82
Obion	Davis, J. P.....	white	Fever.....	April 22, '84	April 2, '84
Tipton	Burrow, Will....	colored	Consumption.....	May 13, '84	Jan. 18, '82
Shelby	Ettons, Fred.....	colored	Killed by falling of rocks.....	May 15, '84	Dec. 11, '83
Lauderdale ...	Titus, Joe.....	colored	Consumption.. ..	May 23, '84	Feb. 11, '83
Shelby... ..	Ryman, George.....	colored	Abscess	May 27, '84	Dec. 28, '81
Hamilton.....	Beil, Ben.....	colored	Consumption....	May 31, '84	Jan. 17, '77

Overton.....	Hammons, John.....	white	Consumption.....	May	6, '84	April	21, '83
Lincoln.....	Quilling, Will.....	white	Diarrhea.....	June	21, '84	July	20, '83
Montgomery	Browder, Peter.....	colored	Scrofula	June	16, '84	Feb.	24, '82
Hickman.....	Cummins, Bill.....	colored	Diarrhea	June	16, '84	March	14, '84
Putnam.....	Cook, Wesley.....	white	Consumption	June	20, '84	Feb.	24, '83
Hamilton.....	Moore, Henry.....	colored	Consumption	June	17, '84	Feb.	23, '84
Franklin	Hilton, Pleas.....	white	Consumption	June	26, '84	July	26, '83
Stewart.....	Baker, George	colored	Consumption	June	28, '84	Dec.	13, '81
Maury.....	Wheatly, George.....	white	Consumption	July	1, '84	Oct.	11, '83
Loudon.....	Dikey, Gilbert.....	colored	Consumption	July	2, '84	April	28, '82
Maury	Carr, Ned.....	colored	Diarrhea.....	July	8, '84	Oct.	11, '83
Shelby.....	Moore, Thad.....	colored	Cancer.....	July	14, '84	Sept.	22, '83
Lincoln	Wells, Ben.....	colored	Dropsy.....	July	15, '84	Nov.	28, '83
Campbell... ..	Weaver, William.....	white	Consumption	July	17, '84	March	26, '83
Shelby..	Ross, Leon.....	colored	Consumption	July	21, '84	Nov.	23, '83
Sumner.....	Hopgood, Warner.....	colored	Fever	July	23, '84	March	8, '84
Fayette.....	Chambers, Gloster.....	colored	Suicide by drowning.....	July	23, '84	July	2, '84
Davidson.....	Partee, Dave.....	colored	Dysentery.....	July	27, '84	Nov.	2, '82
Monroe.....	Cody, Isham.....	colored	General Debility.....	Aug.	9, '84	Jan.	15, '78
Hamilton.....	Brown, Sam.....	colored	Consumption	Aug.	12, '84	June	22, '83
Tipton	Turnage, John.....	colored	Consumption	Aug.	14, '84	Sept.	22, '83
Bradley	Kerr, Samuel.....	white	Consumption	Aug.	26, '84	May	22, '83
Moore.....	Felps, Jack.....	colored	Consumption	Aug.	27, '84	Oct.	17, '83
Haywood....	Maclin, Wm.....	colored	Drowned by accident.....	Aug.	29, '84	Nov.	11, '83
Hamilton.....	Bibbins, Ed.....	colored	Surfeit.....	Sept.	21, '84	Oct.	2, '82
Marshall	Dysart, Jim.....	colored	From wounds rec'd while escaping	Sept.	17, '84	June	17, '84
Shelby	Brown, Nat	colored	Consumption	Sept.	19, '84	April	8, '83
Davidson.....	Stevens, James.....	colored	Heart Disease.....	Oct.	1, '84	Nov.	29, '82

**CONVICT RECORD, SHOWING NUMBER OF PRISONERS THAT DIED AT TRACY CITY,
FROM DECEMBER 1, 1882, TO DECEMBER 1, 1884.**

COUNTY.	NAMES.	COLOR.	CAUSE OF DEATH.	DATE OF DEATH.	DATE OF RECEPTION.
Bedford	Bond, G. B.....	white	Diarrhea.....	Oct. 26, '84	Aug. 24, '83
Blount.....	Morris, Ness.....	colored	Scrofula.....	Oct. 28, '84	Feb. 10, '84
Obion.....	Gardner, Lewis.....	colored	Consumption.....	Oct. 29, '84	April 2, '84
Shelby... ..	Hughes, Wm.....	colored	Diarrhea.....	Oct. 29, '84	April 9, '84
Davidson.....	Lanom, Peter.....	white	Consumption.....	Nov. 4, '84	Feb. 27, '84
Johnson.....	Woods, Jim.....	white	Chronic Diarrhea.....	Nov. 6, '84	July 17, '83
Lincoln	Neely, John.....	white	Consumption.....	Nov. 9, '84	Nov. 7, '83
Hamilton	Weaver, Joe.....	colored	Inflammation of bowels	Nov. 10, '84	Dec. 1, '81
Hamilton.. ..	Ott, Wm.....	white	Broke his neck by a fall.....	Nov. 11, '84	June 20, '84
Shelby.....	Brown, Tom.....	colored	Diarrhea.....	Nov. 20, '84	Dec. 21, '81
Shelby	Morfus, George.....	colored	Scrofula.....	Sept. 1, '84	Dec. 21, '81
Shelby	Phillips, Green.....	colored	Acute Pneumonia.....	Nov. 23, '84	June 4, '84
Crockett.....	Nance, Allen.....	colored	Diarrhea.....	Nov. 24, '84	June 7, '83

Total..... 83

**CONVICT RECORD, SHOWING NUMBER OF PRISONERS THAT DIED AT NASHVILLE,
FROM DECEMBER 1, 1882, TO DECEMBER 1, 1884.**

COUNTY.	NAMES.	COLOR.	CAUSE OF DEATH.	DATE OF DEATH.	DATE OF RECEPTION.
Shelby	Lipscomb, William..	colored	Typhoid Malarial Fever	Dec. 3, '82	Sept. 27, '81
Davidson	Wilson, James.....	white	Pneumonia	Jan. 16, '83	Feb. 16, '82
Robertson	Sommerville, James.....	white	Pneumonia	Jan. 28, '83	Oct. 16, '82
Montgomery ..	Poindexter, Sherman...	colored	Spinal Meningitis.....	Feb. 4, '83	June 20, '82
Weakley.....	Stewart, Dock.....	colored	Consumption	Feb. 11, '83	Nov. 5, '82
Knox.....	Epperson, John	white	Abscess of the Lungs.....	March 22, '83	Oct. 6, '80
Hardin..	Pitts, Lucy	colored	Pneumonia	March 27, '83	May 16, '80
Crockett.....	Carter, Alfred.....	colored	Small-pox.....	April 3, '83	June 10, '82
Haywood.....	Newsom, Ben.....	colored	Inflammation of the Bowels	April 22, '83	Nov. 12, '81
Shelby	Davis, W. C.....	white	Consumption	May 3, '83	April 8, '83
Giles	Peppers, Albert	colored	Consumption	May 19, '83	Jan. 23, '83
Madison.....	De Ford, Wm.....	colored	Remittent Fever.	May 22, '83	Nov. 10, '80
Loudon.....	Talliaferro, Matt.....	colored	Cystitis and Maresmus	May 25, '83	Jan. 29, '79
Madison.....	Pickett, Dave	colored	Pneumonia	May 29, '83	Feb. 12, '83
Madison.....	Ballard, Alf.....	colored	Enteric Fever	June 3, '83	Oct. 28, '82
Hardeman....	Brazzell, Simon.....	colored	Disease of the Heart.. ..	June 24, '83	Dec. 6, '82
Rutherford....	Brown, Will	colored	Phthisis Pulmonalis	July 11, '83	Aug. 22, '82
Maury	Hill, Henry	colored	Dysentery	July 30, '83	Oct. 19, '81
Obion	Dimwood, Mollie.....	colored	Murdered by a Convict.....	Aug. 15, '83	March 29, '83

CONVICT RECORD, SHOWING NUMBER OF PRISONERS THAT DIED AT NASHVILLE,
FROM DECEMBER 1, 1882, TO DECEMBER 1, 1884.

COUNTY.	NAMES.	COLOR.	CAUSE OF DEATH.	DATE OF DEATH.	DATE OF RECEPTION.
Maury	Farris, Thos.....	white	Remittent Fever.....	Sept. 10, '83	June 4, '83
Davidson	White, Ananias	colored	Phthisis Pulmonalis.....	Sept. 11, '83	Oct. 7, '81
Putnam.....	Whittaker, George.....	white	Acute Dysentery.....	Sept. 18, '83	Jan. 6, '83
Hawkins	Hord, Richard	white	Phthisis Pulmonalis.....	Oct. 1, '83	Oct. 2, '77
Crockett	Buchanan, Harry.....	colored	Phthisis Pulmonalis.....	Oct. 8, '83	June 10, '82
Maury	Webster, Hunter	colored	Tuberculosis.....	Oct. 20, '83	June 16, '82
Madison	Meriweather, Phil.....	colored	Urinic Poisoning	Nov. 1, '83	March 3, '77
Jefferson	Davidson, Noah.....	white	Chronic Bronchitis.....	Dec. 6, '83	Aug. ... '77
Stewart.. ..	Barker, Jim	colored	Pneumonia.	Jan. 30, '84	Aug. 24, '82
Madison	Basen, Wm.....	colored	Cirrhosis of the Liver.....	Feb. 22, '84	June 23, '83
Gibson... ..	Farley, De	white	Pneumonia.....	March 25, '84	Aug. 15, '81
Montgomery ..	Johnson, Archie.....	colored	Thoracic Aneurism	April, 20, '84	June 20, '82
Trousdale.....	Richmond, Lou.....	colored	Dropsy Cardiac.....	May 15, '84	Dec. 23, '83
Williamson. ..	Caldwell, Thomas.	colored	Psoas Abscess.....	May 15, '84	Oct. 30, '77
Rutherford....	Doak, Bill.....	colored	Cancer of the Heart and Lungs...	May 29, '84	Dec. 16, '82
Campbell.....	Malloby, Jacob.....	white	Typhoid Fever.....	July 10, '84	Nov. 25, '82
Davidson	Gardner, Bettie	colored	Chronic Diarrhea.....	July 27, '84	Feb. 28, '81
Union	Jarnigan, Joe	colored	Meningitis.....	July 28, '84	July 10, '79
Hardeman.....	Bells, Wm.	colored	Tuberculosis.	Aug. 8, '84	Aug. 1, '83
Campbell.....	Nunn, Thos.....	white	Tuberculosis.	Aug. 29, '84	Nov. 19, '77

Davidson.....	Watson, Jim.....	colored	Typhoid Fever.....	Sept.	9, '84	March 10, '84
Montgomery .	Collins, Wm.	colored	Tuberculosis of the Bowels.....	Oct.	1, '84	June 7, '84
Madison ...	White, Cæsar	colored	Vulnus Septisemia.....	Oct.	10, '84	March 3, '83
Lauderdale....	Welsh, John.....	colored	Hepatic Dropsy.....	Nov.	3, '84	June 10, '82

**CONVICT RECORD, SHOWING NUMBER OF PRISONERS THAT DIED AT COAL CREEK,
FROM DECEMBER 1, 1882, TO DECEMBER 1, 1884.**

COUNTY.	NAME.	COLOR.	CAUSE OF DEATH.	DATE OF DEATH.	DATE OF RECEPTION.
Greene.....	Harris, Frazier.....	white	Cerebro-spinal Fever.....	Dec. 18, '82	Oct. 11, '82
Knox	Jackson, W. W.....	colored	Dropsy.. ..	April 21, '83	May 28, '81
Campbell.....	Walker, Charlie.	colored	Pneumonia.....	April 26, '83	Nov. 25, '82
Dyer.. ..	Smith, Andrew.....	colored	Pneumonia.....	May 21, '83	Feb. 14, '82
Sevier	Nelson, George.....	white	Killed trying to escape	July 3, '83	March 29, '83
Blount.....	Smith, Henry.....	white	Inflammation of the Bowels.....	Aug. 2, '83	Oct. 26, '82
Campbell.....	Spencer, Wash.....	colored	Pulmonary Consumption.....	Aug. 3, '83	Nov. 28, '81
Knox.....	Cowan, Will.....	white	Chronic Diarrhea.....	Oct. 8, '83	Feb. 3, '83
Haywood... ..	Caldwell, Alex.....	colored	Killed by Falling Slate.....	Dec. 15, '83	March 16, '77
Washington..	Combs, Jim.....	white	Consumption	Jan. 22, '84	March 26, '83
Hamblen.....	Smith, Sam.....	colored	Gastritis and Intestitis	Jan. 11, '84	Dec. 11, '80
Anderson.....	Parton, John	white	Pulmonary Tuberculosis.....	Jan. 11, '84	March 15, '83
Campbell.....	Johnson, Wm.....	colored	Scrofula.....	Jan. 28, '84	March 26, '83
Knox.....	Sampleton, Bob.....	colored	Pulmonary Tuberculosis.....	Feb. 4, '84	June 11, '81
Cooke.....	Evans, George.....	colored	Acute Pulmonalis	March 6, '84	Dec. 10, '81
Fentress	Stephens, W.....	white	Congestion of Lungs.....	March 13, '84	Dec. 8, '83
Shelby	Williams, Warren.....	colored	Cystitis Peritonitis.....	March 20, '84	Sept. 27, '81
McMinn	Lowery, A. J.....	white	Chronic Diarrhea.....	May 19, '84	Nov. 23, '83
Anderson	Halloway, Jerry.....	white	Pneumonia	June 1, '84	Nov. 18, '82
Morgan.....	Fillmore, Ridle.....	white	Consumption.....	June 4, '84	Nov. 8, '82
Crockett	Cole, Peter.....	colored	Pneumonia.....	July 5, '84	June 10, '82

Montgomery..	Butler, Jasper.....	colored	Consumption.....	July	23, '84	Feb.	18, '76
Fentress	Bowles, W.....	colored	Masturbation	July	24, '84	April	10, '80
Morgan.....	York, Isaac.	white	Cholera Morbus.....	Aug.	1, '84	Oct.	13, '83
Madison.....	Patrick, Sam.....	colored	Pneumonia Fever.....	Aug.	15, '84	July	4, '77
Carter.....	Ingraham, John.....	white	Malarial Fever.....	Aug.	26, '84	March	28, '83
Knox.....	Banks, George.....	colored	Killed by Falling Slate.....	Aug.	31, '84	June	6, '84
Washington ..	Sherfey, James.....	colored	Cystitis and Intestitis	Sept.	15, '84	Aug.	28, '83
Trousdale	Turner, Lone	colored	Fever	Sept.	17, '84	May	8, '82
Knox.....	Vance, Ed.....	colored	Dropsy	Sept.	23, '84	June	5, '83
Williamson ...	Bethel, W. A.....	white	Killed by Falling Slate.....	Sept.	30, '84	July	27, '82
Hamblen	Wilburn, Wm.....	white	Diarrhea	Oct.	2, '84	Aug.	8, '82
Sevier	Sparks, Daniel.....	white	Pneumonia	Oct.	13, '84	July	31, '83
Roane	Prichard, Speed	colored	Consumption.....	Oct.	28, '84	April	27, '84
Shelby	Smith, Henry.....	colored	Typhoid Fever.....	Oct.	29, '84	Sept.	20, '84
Knox.....	Lane, George.. ..	white	Fever.....	Nov.	5, '84	Nov.	10, '81

Total..... 36

**CONVICT RECORD, SHOWING NUMBER OF PRISONERS THAT DIED AT INMAN,
FROM DECEMBER 1, 1882, TO DECEMBER 1, 1883.**

COUNTY.	NAME.	COLOR.	CAUSE OF DEATH.	DATE OF DEATH.	DATE OF RECEPTION.
Crockett	Thacker, Ruf.....	colored	Killed Attacking Guard.....	Aug. 23, '88	June 7, '83
Crockett	Billiard, Mack.....	colored	Heart Disease.....	Sept. 3, '83	March 9, '82
Davidson.....	Rucker, Stephen.....	colored	Typho-Malarial Fever.....	Sept. 13, '83	July 7, '83
Rutherford ..	Mangrum, Burrell.....	white	Chronic Diarrhea.....	Oct. 6, '88	April 17, '82
Scott.....	Clark, Hoskins.....	colored	Dropsy of Stomach.....	Oct. 8, '83	Nov. 29, '82
Blount.....	Kenedy, Elias.....	white	Dysentery.....	Oct. 20, '83	Oct. 14, '81
Rutherford....	Butler, Tom.....	colored	Typhoid Fever.....	Oct. 22, '83	April 19, '83
Madison	Buckley, Jake.....	colored	Dropsy.....	Oct. 27, '83	March 1, '82
Gibson.....	Berry, William.....	white	Chronic Diarrhea.....	Nov. 6, '83	Dec. 4, '82
Shelby	Carroll, Carey.....	colored	Typhoid Fever.....	Nov. 11, '83	June 20, '83
Shelby	Howard, George.....	colored	Meningitis.....	Nov. 20, '83	Sept. 15, '83
Shelby	Moore, David	colored	Rheumatism.....	Nov. 30, '83	Dec. 31, '81
AT ENSLEY'S FARM.					
Shelby	Buntyd, Robert	colored	Cerebro-spinal Meningitis.....	Jan. 19, '83	Dec. 15, '81
AT SPENCE FARM (DR. MORROW'S).					
Davidson.....	Orange, Hugh.....	colored	Pneumonia.....	April 13, '83	Feb. 26, '81

**CONVICT RECORD, SHOWING NUMBER OF PRISONERS THAT DIED AT INMAN,
FROM DECEMBER 1, 1883, TO DECEMBER 1, 1884.**

COUNTY.	NAME.	COLOR.	CAUSE OF DEATH.	DATE OF DEATH.	DATE OF RECEPTION.
McNairy	Lindsey, Tom.....	colored	Dropsy.....	Dec. 7, '83	July 14, '80
Davidson.....	McAdams, W. C.....	white	Diarrhea.....	Dec. 9, '83	Feb. 15, '82
Hardeman.....	Strong, James.....	colored	Consumption.....	Dec. 19, '83	April 1, '83
Knox.....	Bates, Phil.....	colored	Pneumonia.....	Jan. 9, '84	Feb. 7, '83
Lincoln	Lamb, Ab.....	colored	Dysentery.....	Jan. 10, '84	March 23, '83
Lawrence	Thornton, Henry.....	colored	Dropsy.....	Jan. 17, '84	Dec. 28, '82
Hardeman.....	Fuller, Ike.....	colored	Ulceration of Bowels	Jan. 22, '84	Aug. 1, '83
Lauderdale	Cross, John.....	colored	Consumption.....	Feb. 4, '84	June 15, '83
Haywood.	Burks, Dave.....	colored	Chronic Diarrhea.....	Feb. 7, '84	July 1, '82
Haywood	Gardner, Will.....	colored	Dropsy.....	Feb. 9, '84	March 21, '83
Hardeman.....	Bizzell, Cornelius.....	white	Consumption.....	Feb. 23, '84	July 28, '83
Shelby	Davis, Hall.....	colored	Old Age.....	Feb. 27, '84	Aug. 27, '83
Giles.....	Pendergrass, Mat.....	white	Consumption.....	March 2, '84	April 14, '81
Haywood.....	Yancy, Buford.....	colored	Diarrhea.....	March 5, '84	July 16, '83
Shelby	Berry, Manuel.....	colored	Asthenia.....	March 18, '84	June 20, '83
Haywood.....	Outlaw, Joe.....	colored	Consumption.....	April 6, '84	July 1, '83
Madison.....	Coleman, Frank	colored	Pneumonia.....	April 27, '84	Oct. 29, '82
Shelby.....	Thurston, Wm.....	colored	Pulmonary Congestion.....	April 27, '84	Jan. 16, '84
Haywood.....	Hines, Alex.....	colored	Pneumonia.....	May 19, '84	July 1, '83
Hardeman.....	Evans, Wm.....	white	Typhoid Fever.....	May 22, '84	March 27, '84
Davidson.....	Sheppard, George.....	white	Pneumonia.....	May 9, '84	Oct. 13, '83

CONVICT RECORD, SHOWING NUMBER OF PRISONERS THAT DIED AT INMAN, FROM DECEMBER 1, 1883, TO DECEMBER 1, 1884.

COUNTY.	NAME.	COLOR.	CAUSE OF DEATH.	DATE OF DEATH.	DATE OF RECEPTION.
Shelby	Morris, Frank.....	colored	Burns, caused by Explosion.....	June 2, '84	May 10, '83
Shelby	Smith, Henry.....	colored	Burns, caused by Explosion.....	June 8, '84	Oct. 25, '83
Maury	Miller, Joe.....	colored	Consumption.....	June 6, '84	Oct. 11, '83
Houston	Puckett, Wm.....	white	Acute Pleuritis.....	Aug. 30, '84	March 5, '84
Davidson.....	Beck, James.....	colored	Congestion of Bowels.....	Oct. 26, '84	Jan. 29, '83
Maury	Dawson, Baalam	colored	Consumption	Oct. 28, '84	Feb. 26, '82
Maury	Tisdale, D. M.....	white	Pneumonia.....	Nov. 10, '84	Oct. 21, '82
Haywood.....	Taylor, John Henry....	colored	Consumption.....	Nov. 12, '84	March 21, '83
For the year 1883.....					12
For the year 1884.....					29
Total.....					41

RECORD OF PRISONERS PARDONED, FROM DECEMBER 1, 1882, TO DECEMBER 1, 1883.

DATE.	NAME.	COLOR.	COUNTY.	BY WHOM.	YEARS.
Dec. 9, '82	Grice, John.....	white	Franklin	Gov. Alvin Hawkins.	3
Dec. 9, '82	Beasley, John.....	colored	Montgomery..	Gov. Alvin Hawkins.	3
Dec. 9, '82	Clements, George.....	white	Davidson.....	Gov. Alvin Hawkins.	17
Dec. 9, '82	Johnson, Houston.....	colored	Hamilton	Gov. Alvin Hawkins.	1
Dec. 21, '82	Pearce, Mitchell.....	white	Bedford	Gov. Alvin Hawkins.	10
Dec. 21, '82	Dunlap, Watt	colored	Madison	Gov. Alvin Hawkins.	4
Dec. 21, '82	Claxton, Alex.....	colored	Shelby	Gov. Alvin Hawkins.	3
Dec. 25, '82	Moxley, John	white	Gibson	Gov. Alvin Hawkins.	2
Dec. 25, '82	Stanford, Rolly.....	white	Fentress	Gov. Alvin Hawkins.	5
Dec. 25, '82	Holmes, A. J.....	white	Hardin	Gov. Alvin Hawkins.	10
Jan. 5, '83	Carter, Goens.....	white	Cannon..	Gov. Alvin Hawkins.	3
Jan. 5, '83	Smith, Jack.....	colored	Davidson.....	Gov. Alvin Hawkins.	3
Jan. 6, '83	Wesley, Wm.	colored	Davidson.....	Gov. Alvin Hawkins.	3
Jan. 2, '83	Davidson, Reece	white	Smith	Gov. Alvin Hawkins.	3
Jan. 10, '83	Hessey, Eddy.....	white	Gibson... ..	Gov. Alvin Hawkins.	1
Jan. 10, '83	Harrison, Wm.....	white	Davidson.....	Gov. Alvin Hawkins.	10
Jan. 12, '83	Russell, S. M.....	white	Madison	Gov. Alvin Hawkins.	4
Jan. 12, '83	Montgomery, Willis.....	colored	Shelby.....	Gov. Alvin Hawkins.	15

Jan.	12, '83	Watkins, J. L.	colored	Davidson	Gov.	Alvin Hawkins.	12
Jan.	12, '83	Long, James, alias Jones	colored	Warren	Gov.	Alvin Hawkins.	21
Jan.	13, '83	McDonald, Chas.	colored	Davidson	Gov.	Alvin Hawkins.	3
Jan.	13, '83	Lytle, Ed	colored	Rutherford	Gov.	Alvin Hawkins.	21
Jan.	13, '83	Halbert, Rush	colored	Rutherford	Gov.	Alvin Hawkins.	21
Jan.	13, '83	Belles, Henry	colored	Hamblen	Gov.	Alvin Hawkins.	5
Jan.	13, '83	Garner, Jno	white	Williamson	Gov.	Alvin Hawkins.	21
Jan.	6, '83	Rhea, Della M.	colored	Madison	Gov.	Alvin Hawkins.	1
Total							26

RECORD OF PRISONERS PARDONED, FROM DECEMBER 1, 1882, TO DECEMBER 1, 1883.

DATE.	NAME.	COLOR.	COUNTY.	BY WHOM.	YEARS.
Dec. 9, '82	Grice, John.....	white	Franklin	Gov. Alvin Hawkins.	3
Dec. 9, '82	Beasley, John.....	colored	Montgomery..	Gov. Alvin Hawkins.	3
Dec. 9, '82	Clements, George.....	white	Davidson.....	Gov. Alvin Hawkins.	17
Dec. 9, '82	Johnson, Houston.....	colored	Hamilton	Gov. Alvin Hawkins.	1
Dec. 21, '82	Pearce, Mitchell.....	white	Bedford	Gov. Alvin Hawkins.	10
Dec. 21, '82	Dunlap, Watt	colored	Madison	Gov. Alvin Hawkins.	4
Dec. 21, '82	Claxton, Alex.....	colored	Shelby	Gov. Alvin Hawkins.	3
Dec. 25, '82	Moxley, John	white	Gibson	Gov. Alvin Hawkins.	2
Dec. 25, '82	Stanford, Rolly.....	white	Fentress	Gov. Alvin Hawkins.	5
Dec. 25, '82	Holmes, A. J.....	white	Hardin	Gov. Alvin Hawkins.	10
Jan. 5, '83	Carter, Goens.....	white	Cannon..	Gov. Alvin Hawkins.	3
Jan. 5, '83	Smith, Jack	colored	Davidson.....	Gov. Alvin Hawkins.	3
Jan. 6, '83	Wesley, Wm.	colored	Davidson.....	Gov. Alvin Hawkins.	3
Jan. 2, '83	Davidson, Reece	white	Smith	Gov. Alvin Hawkins.	3
Jan. 10, '83	Hessey, Eddy.....	white	Gibson... ..	Gov. Alvin Hawkins.	1
Jan. 10, '83	Harrison, Wm.....	white	Davidson.....	Gov. Alvin Hawkins.	10
Jan. 12, '83	Russell, S. M.....	white	Madison	Gov. Alvin Hawkins.	4
Jan. 12, '83	Montgomery, Willis.....	colored	Shelby.....	Gov. Alvin Hawkins.	15

Jan.	12, '83	Watkins, J. L	colored	Davidson.....	Gov. Alvin Hawkins.	12
Jan.	12, '83	Long, James, alias Jones.....	colored	Warren	Gov. Alvin Hawkins.	21
Jan.	13, '83	McDonald, Chas.....	colored	Davidson.....	Gov. Alvin Hawkins.	3
Jan.	13, '83	Lytle, Ed	colored	Rutherford....	Gov. Alvin Hawkins.	21
Jan.	13, '83	Halbert, Rush	colored	Rutherford....	Gov. Alvin Hawkins.	21
Jan.	13, '83	Belles, Henry	colored	Hamblen.....	Gov. Alvin Hawkins.	5
Jan.	13, '83	Garner, Jno	white	Williamson ..	Gov. Alvin Hawkins.	21
Jan.	6, '83	Rhea, Della M.....	colored	Madison	Gov. Alvin Hawkins.	1
Total.....						26

RECORD OF PRISONERS PARDONED, FROM DECEMBER 1, 1883, TO DECEMBER 1, 1884.

DATE.	NAME.	COLOR.	COUNTY.	BY WHOM.	YEARS.
March 1, '83	Rutland, Thomas.....	colored	Wilson.....	Gov. William B. Bate.	3
March 19, '83	Lavell, James.....	white	Shelby	Gov. William B. Bate.	3
March 26, '83	Calicut, Bluford.....	white	Putnam	Gov. William B. Bate.	3
April 2, '83	Bailey, Tom.....	white	Marion	Gov. William B. Bate.	3
May 4, '83	Arbuckle, James.....	white	Shelby... ..	Gov. William B. Bate.	3
May 9, '83	Jenkins, Carroll.....	colored	Madison	Gov. William B. Bate.	1 $\frac{3}{4}$
May 11, '83	Morton, W. M.....	white	Davidson.....	Gov. William B. Bate.	4
May 19, '83	Slaughter, Hick.....	white	Rutherford ...	Gov. William B. Bate.	21
July 17, '83	McClure, Bradley.....	white	Maury	Gov. William B. Bate.	10
Aug. 31, '83	Jones, W. G.....	white	McMinn	Gov. William B. Bate.	5
Sept. 19, '83	Hill, Thomas H.....	white	Coffee.....	Gov. William B. Bate.	3
Nov. 29, '83	Jefferson, Lewis.....	colored	Shelby.....	Gov. William B. Bate.	10
Dec. 25, '83	McClure, Lewis.....	colored	Marshall	Gov. William B. Bate.	19
Dec. 25, '83	Goodner, Frank.....	colored	Bradley	Gov. William B. Bate.	1
Dec. 25, '83	Smith, Wm.....	white	Cumberland...	Gov. William B. Bate.	Life.
Feb. 21, '84	*Smith, Morgan	white	Crockett	Gov. William B. Bate.	15
Feb. 27, '84	Crutchfield, C. W.....	white	Henry	Gov. William B. Bate.	3
April 17, '84	Banks, Maria.....	colored	Knox.....	Gov. William B. Bate.	3
May 5, '84	Kelly, J. D.....	white	Madison.....	Gov. William B. Bate.	4
April 29, '84	Rudd, Parson.....	colored	McNairy	Gov. William B. Bate.	10
May 7, '84	Brown, Abram.....	white	Claiborne	Gov. William B. Bate.	2

* Was pardoned on account of ill health.

May	8, '84	Farmer, Jack.....	white	Bedford.	Gov. William B. Bate.	1
May	15, '84	Jones, W. H.....	white	Rhea.....	Gov. William B. Bate.	1
June	6, '84	Rawles, Wesley.....	white	Robertson.....	Gov. William B. Bate.	9
June	7, '84	West, Thomas.....	white	Wayne.....	Gov. William B. Bate.	3
June	14, '84	Roland, George.....	colored	Maury.....	Gov. William B. Bate.	2
Aug.	23, '84	Nelson, George W..	white	Monroe.....	Gov. William B. Bate.	3
Aug.	27, '84	Smith, Henry.....	white	Davidson.....	Gov. William B. Bate.	3
Aug.	27, '84	DeLaoy, Chas. T.....	white	Davidson.....	Gov. William B. Bate.	3

9—Prison.

Prisoners pardoned, from December 1, 1882, to December 1, 1883..... 26
 Prisoners pardoned, from December 1, 1883, to December 1, 1884..... 29

Grand total..... 55

RECORD OF ESCAPED PRISONERS, FROM DECEMBER 1, 1882, TO DECEMBER 1, 1883.

DATE OF ESCAPE.	NAMES.	COLOR.	COUNTY.	WHERE FROM.	YEARS
Dec. 12, '82	Jones, Henry.....	colored	Davidson.....	Nashville.	3
Feb. 1, '83	Brooks, Claude.....	colored	Henderson....	Tracy City.	3
Feb. 1, '83	McDowell, Gudger.....	colored	Madison.....	Tracy City.	3
Feb. 7, '83	Queen, Joseph.....	white	Monroe.....	Hatton.	3
Feb. 3, '83	*Farris, Henry.....	colored	Davidson.....	Star Mine.	4
Feb. 3, '83	*Cashman, W. J.....	white	Haywood.....	Star Mine.	5
Jan. 17, '83	Wilbourne, Amos.....	colored	Shelby.....	Hatton.	4
Feb. 3, '83	Wilson, Henry.....	colored	Shelby.....	Hatton.	3
March 16, '83	*Harrison, Horace.....	colored	Davidson.....	Pest House.	3
April 6, '83	Allen, George.....	colored	Marion.....	Tracy City.	10
April 11, '83	*Coffee, James.....	white	Jackson.....	Tracy City.	7
April 11, '83	*White, Andrew.....	white	Dixon.....	Tracy City.	Life.
April 11, '83	Drake, Will.....	white	Haywood.....	Tracy City.	21
April 16, '83	Haskett, Zeke.....	colored	Fayette.....	Star Mine.	2
April 23, '83	Fain, Sterling.....	colored	Knox.....	Spence Farm.	2
April 23, '83	Colbert, Moses.....	colored	Madison.....	Spence Farm.	3
April 26, '83	Smith, Sam.....	colored	McMinn.....	Tracy City.	2
May 7, '83	*Griffin, John.....	colored	Hamilton.....	Pest House.	1½
May 9, '83	*Gleaves, Maggie.....	colored	Davidson.....	Nashville.	15
May 9, '83	Buford, Bettie.....	colored	Maury.....	Nashville.	3
May 11, '83	Cutright, Mitch.....	colored	Madison.....	Nashville.	5
May 8, '83	Cunningham, Henry.....	colored	Obion.....	Tracy City.	3
May 8, '83					5½

May	8, '83	Kight, W.....	white	Hamilton.....	Tracy City.	3
May	8, '83	Thompson, Thomas.....	white	Hamilton.....	Tracy City.	17
May	8, '83	*Washington, George.....	colored	Hardeman.....	Tracy City.	10
May	8, '83	*Mathews, Wash.....	colored	Davidson.....	Tracy City.	7
May	8, '83	*Lanier, Gilbert.....	colored	Davidson.....	Tracy City.	11
May	8, '83	*Dowell, Henry.....	colored	Davidson.....	Tracy City.	5
May	8, '83	*Johnson, Ch.....	colored	Madison.....	Tracy City.	13
May	8, '83	*Oll, George.....	colored	Bedford.....	Tracy City.	3
May	8, '83	*Harrison, William.....	colored	Bedford	Tracy City.	1
May	8, '83	*Wilson, Frank.....	colored	Hardeman.....	Tracy City.	2 $\frac{1}{2}$
May	8, '83	*Stewart, Thom.....	colored	Bedford.....	Tracy City.	5
May	8, '83	*Wilson, Sam.....	white	Robertson.....	Tracy City.	8
June	2, '83	*Burton, Calvin.....	white	Claiborne.....	Coal Creek.	3
June	14, '83	Tucker, James.....	colored	Shelby	Ensley's Farm.	3
June	13, '83	*White, Caesar.....	colored	Madison.....	Tracy City.	5
June	25, '83	*Parton, John.....	white	Anderson.....	Coal Creek.	1
July	3, '83	Thomas, Henry.....	colored	Davidson.....	Spence Farm.	3
July	4, '83	Williams, Jim.....	colored	Davidson.....	Tracy City.	10
July	3, '83	Dunn, J. A. B.....	white	Knox.....	Coal Creek.	3
July	3, '83	*Wallace, Alex.....	white	Campbell.....	Coal Creek.	3
July	17, '83	Wray, Woodford.....	colored	Robertson.....	Coal Creek.	21
Aug.	2, '83	Mays, John.....	colored	Henry.....	Nashville.	1
July	19, '83	Pryor, Andy.....	colored	Lincoln.....	Tracy City.	4
Aug.	29, '83	Mynett, Ganum.....	white	Anderson.....	Nashville.	15
Sept.	9, '83	Seay, Marcus.....	colored	Rutherford.....	Spence Farm.	5
Oct.	1, '83	Larimore, Tom.....	white	Knox.....	Coal Creek.	3 $\frac{1}{2}$
Oct.	8, '83	*Revis, Lafayette.....	white	Bedford.....	Inman.	15
Oct.	7, '83	Jarratt, Sam.....	colored	Rutherford.....	Spence Farm.	2

RECORD OF ESCAPED PRISONERS, FROM DECEMBER 1, 1882, TO DECEMBER 1, 1883.

DATE OF ESCAPE.	NAMES.	COLOR.	COUNTY.	WHERE FROM.	YEARS
Nov. 3, '83	*Nelson, Jim.....	colored	Madison	Inman.	15
Nov. 3, '83	Woods, John alias Winn.....	white	Hamilton....	Inman.	3
Sept. 3, '83	*Woods, Jack.....	colored	Polk.....	Tracy City.	3
Nov. 29, '83	Rigsby, Dan.....	white	Shelby	Tracy City.	9
Nov. 29, '83	Richards, Chas.....	white	Shelby.....	Tracy City.	1
Nov. 29, '83	Doxey, John.....	white	Rutherford....	Tracy City.	6

Escaped prisoners marked thus (*) were recaptured and returned to prison.

RECORD OF ESCAPED PRISONERS, FROM DECEMBER 1, 1883, TO DECEMBER 1, 1884.

DATE OF ESCAPE.	NAMES.	COLOR.	COUNTY.	WHERE FROM.	YEARS
Jan. 1, '84	*Mitchel, Mose.....	colored	Tipton.....	Tracy City.	7
Jan. 10, '84	*Nathan, Charles.....	white	Henry.....	Inman.	1
Jan. 14, '84	Shaw, Louis.....	colored	Shelby.....	Tracy City.	4
Jan. 30, '84	*Oswald, James.....	colored	Hardeman.....	Inman.	1½
April 7, '84	Lea, G. W.....	white	Blount.....	Coal Creek.	3
April 23, '84	*Morris, Wm.....	colored	Shelby.....	Inman.	8
April 28, '84	Woods, Jack.....	colored	Polk.....	Tracy City.	6
May 19, '84	Dempsey, John.....	white	Washington ..	Tracy City.	2
May 23, '84	*Morris, Wm.....	colored	Shelby.....	Inman.	8
May 23, '84	*Bell, John.....	colored	Davidson.....	Inman.	9
May 23, '84	*Edmondson, Lewis..	white	Marion.....	Inman.	3
May 28, '84	*Walker, George.....	colored	Gibson.....	Coal Creek.	12
June 1, '84	*Miller, Henry N.....	white	Jefferson.....	Inman.	9
June 25, '84	McLemore, Albert.....	white	Loudon.....	Tracy City.	6
July 19, '84	Beasley, Prince.....	colored	Weakley.....	Tracy City.	8
July 21, '84	Jackson, Pleas.....	colored	Shelby.....	Tracy City.	7
July 23, '84	Thompson, Jessie.....	colored	Davidson.....	Tracy City.	9
July 26, '84	Hunt, Allen.....	colored	Hamilton.....	Tracy City.	3
July 26, '84	Smith, Surrey.....	colored	Davidson	Dr. Morrow's Farm.	1
July 29, '84	Robinson, Joe.....	colored	Shelby	Tracy City.	1
July 30, '84	Spain, Willis.....	colored	Shelby	Tracy City.	5
July 30, '84	Galbreath, Lee.....	colored	Davidson	Tracy City.	5

RECORD OF ESCAPED PRISONERS, FROM DECEMBER 1, 1883, TO DECEMBER 1, 1884.

DATE OF ESCAPE.	NAMES.	COLOR.	COUNTY.	WHERE FROM.	YEARS
July 30, '84	Wells, Clem.....	colored	Bedford	Tracy City.	1
Aug. 2, '84	Gaines, Rob.....	colored	Tipton	Tracy City.	10
July 28, '84	Williams, Pres.....	colored	Davidson.....	Inman.	5
Aug. 13, '84	Ward, John.....	colored	Weakley.....	Nashville.	5
Aug. 13, '84	Williams, Henry.....	colored	Shelby	Nashville.	3
Aug. 15, '84	Myers, James.....	white	Coffee.....	Tracy City.	3
Aug. 28, '84	*Johnson, E. J.....	colored	Shelby	Tracy City.	1
Sept. 27, '84	Woods, Charles.....	colored	Haywood	Dr. Morrow's Farm.	5
May 10, '84	Williams, Chas.....	white	Blount.....	Tracy City.	1
Oct. 4, '84	*James, Frank.....	white	Davidson.....	Tracy City.	1
Sept. 4, '84	McLane, Henry.....	colored	Roane	Coal Creek.	2
Oct. 4, '84	Bell, John.....	colored	Lake.....	Tracy City.	5
Nov. 12, '86	Mitchell, Mose.....	colored	Tipton... ..	Tracy City.	7
Nov. 24, '84	Carmichael, Jerry.....	colored	Williamson ..	Tracy City.	10
Nov. 24, '84	Henderson, Warren.....	colored	Shelby.	Tracy City.	5

*Recaptured.

RECORD OF PRISONERS RECAPTURED FROM DEC. 1, 1882, TO NOV. 30, 1883, INCLUSIVE.

DATE OF RECAPTURE.	NAME.	COLOR.	COUNTY.	WHERE ESCAPED FROM.	YEARS
Dec. 18, '82	Martin, Robert.....	colored	Rhea.....	.....	5
Feb. 13, '83	Nearin, Wm.....	colored	Hardeman.....	Star Mines.	3
Feb. 3, '83	Farris, Henry.....	colored	Davidson.....	Star Mines.	4
Feb. 3, '83	Cashman, W. J.....	white	Haywood.....	Star Mines.	5
March 15, '83	Coopwood, Marion.....	colored	Shelby.....	Ensley's Farm.	3
March 17, '83	Harrison, Horace.....	colored	Davidson.....	Pest-house.	3
May 9, '83	Gleaves, Maggie.....	colored	Davidson.....	Nashville.	3
May 21, '83	White, Andrew.....	white	Dickson.....	Tracy City.	Life.
May 23, '83	Marshall, Ben.....	colored	Shelby.....	Tracy City.	3
May 9, '83	Mathews, Wash.....	colored	Davidson.....	Tracy City.	7
May 9, '83	Lanier, Gilbert.....	colored	Davidson.....	Tracy City.	11
May 9, '83	Dowell, Henry.....	colored	Davidson.....	Tracy City.	5
May 9, '83	Johnson, Chas.....	colored	Madison.....	Tracy City.	13
May 9, '83	Oll, George.....	colored	Bedford.....	Tracy City.	3
May 9, '83	Harrison, Wm.....	colored	Bedford.....	Tracy City.	1
May 9, '83	Wilson, Frank.....	colored	Hardeman.....	Tracy City.	24
May 9, '83	Stewart, Tom.....	colored	Bedford.....	Tracy City.	5
May 9, '83	Wilson, Sam.....	colored	Robertson.....	Tracy City.	8
Feb. 22, '83	Porter, John.....	colored	Maury.....	Big Creek.	15
June 5, '83	Washington, Lunar.....	colored	Washington...	Vulcan Mines.	5
June 14, '83	Douglass, Julius.....	colored	Shelby.....	Ensley's Farm.	3
June 28, '83	Burton, Calvin.....	white	Claiborne.....	Coal Creek.	3

July	1, '83	Parton, John..	.....	white	Anderson	Coal Creek.	1
July	3, '83	Wallace, Alex.....	.....	white	Campbell.....	Coal Creek.	3
July	27, '83	Coffee, James.....	.....	white	Jackson	Tracy City.	7
Sept.	17, '83	Gass, Lizzie.....	.....	white	Knox.....	Coal Creek.	2
Oct.	13, '83	Williams, J. W.....	.....	colored	Shelby.....	Coal Creek.	10
Oct.	12, '83	Revis, Lafayette.....	.....	white	Bedford	Inman.	15
Sept.	14, '83	Brown, Ralph.....	.....	colored	Shelby..	Ensley's Farm.	2
Nov.	2, '83	Griffin, John .....	.....	colored	Knox.....	Pest-house.	15
Nov.	6, '83	Nelson, Jim.....	.....	colored	Shelby	Inman.	15

RECORD OF PRISONERS RECAPTURED, FROM DEC. 1, 1883, TO DEC. 1, 1884.

DATE OF RECAPTURE.	NAME.	COLOR.	COUNTY.	WHERE ESCAPED FROM.	YEARS
Dec. 5, '83	Woods, Jack.....	colored	Polk..	Tracy City.	3
Dec. 15, '83	Kirby, W.....	white	McMinn	Tracy City.	3
Jan. 6, '84	Mitchell, Mose.....	colored	Tipton... ..	Tracy City.	7
Jan. 12, '84	Forster, Hiram.....	white	Scott..	Coal Creek.	5
Jan. 12, '84	Nathan, Charles.....	white	Henry	Inman.	1
Jan. 31, '84	Oswald, James.....	colored	Hardeman....	Inman.	1½
March 5, '84	Lyons, Joseph.....	colored	Shelby	Forest Farm.	10
March 18, '84	McLean, John.....	white	Shelby	Star Mines.	5
March 18, '84	Wirt, Green.....	colored	Fayette.....	Ensley's Farm.	5
April 24, '84	Morris, Wm.....	colored	Shelby	Inman.	8'
May 23, '84	Morris, Wm.....	colored	Shelby	Inman.	8
May 24, '84	Bell, John.....	colored	Davidson... ..	Inman.	9
June 4, '84	Walker, George.....	colored	Gibson.	Coal Creek.	12
June 19, '84	Edmondson, Lewis.....	white	Marion..	Inman.	3
June 29, '84	Miller, Henry N.....	white	Jefferson.....	Inman.	9
July 27, '84	Washington, George.....	colored	Hardeman....	Tracy City.	10
Aug. 23, '84	White, Caesar.....	colored	Madison.	Tracy City.	5
Sept. 15, '84	Johnson, E. J.....	colored	Shelby	Tracy City.	1
Nov. 7, '84	Curry, Chas.....	colored	Davidson.....	Star Mines.	3
Nov. 18, '84	Moody, John.....	colored	Shelby	Ensley's Farm.	3
Nov. 17, '84	James, Frank.....	white	Davidson.....	Tracy City.	1

Grand total 52

**PRISONERS REMANDED BY ORDER OF COURT,
FROM DECEMBER 1, 1882, TO DECEMBER 1, 1884.**

NAMES.	COLOR.	COUNTY.	BY WHOSE ORDER.	DATE.
Shy, Berry.....	white	Sumner.....	Supreme Court.....	March 26, '83
Cybert, Turner.....	colored	Wayne.....	Supreme Court.....	May 24, '83
Harris, John.....	white	Coffee.....	Judge Reid.....	Jan. 13, '83
Wilson, Will.....	colored	Davidson.....	Judge Allen.....	Aug. 7, '83
McCool, Joe.....	white	Marshall.....	Judge Allen.....	May 23, '84
Powell, Wm.....	white	Davidson.....	Supreme Court.....	March 10, '84
Total				6

BALANCE SHEET.

COMMENCING DECEMBER 1, 1882, TO DECEMBER 1, 1884.

DR.

Prisoners on Hand, Dec. 1, 1882, at Nashville.....	685	
Prisoners on Hand, Dec. 1, 1882, at Dr. Morrow's farm.....	24	
Prisoners on Hand Dec. 1, 1882, at Knoxville & Ohio Railroad Tunnel.....	28	
Prisoners on Hand Dec. 1, 1882, at Star Mines.....	30	
Prisoners on Hand Dec. 1, 1882, at Coal Creek.....	145	
Prisoners on Hand Dec. 1, 1882, at Ensley's farm....	89	
Prisoners on Hand Dec. 1, 1882, at Tracy City.....	325	
	<hr/>	1,326
Received from Dec. 1, 1882, to Dec. 1, 1884.....		1,129
Recaptured from Dec. 1, 1882, to Dec. 1, 1884.....		52
		<hr/>
Total		2,507

CR.

Prisoners Discharged on Full Time, from Dec. 1, 1882, to Dec. 1, 1884.....	24	
Discharged on Good Time, for the Same Period.....	801	
Deaths from Dec. 1, 1882, to Dec. 1, 1884.....	205	
Pardoned by Gov. Alvin Hawkins, from Dec. 1, 1882, to January 15, 1883.....	26	
Pardoned by Gov. Wm. B. Bate, from January 15, 1883, to December 1, 1884.....	29	
	<hr/>	55
Escaped.....	93	
Remanded by Order of Court.....	6	
Prisoners on Hand Dec. 1, 1884, at Main Prison.....	528	
Prisoners on Hand Dec. 1, 1884, at Dr. Morrow's farm.....	21	
Prisoners on Hand Dec. 1, 1884, at Tracy City.....	436	
Prisoners on Hand Dec. 1, 1884, at Inman.....	177	
Prisoners on Hand Dec. 1, 1884, at Coal Creek.....	161	
	<hr/>	1,323
Total		2,507

NAMES OF PRISONERS WHOSE SENTENCES HAVE BEEN COMMUTED.

COUNTY.	NAMES.	COLOR.	DATE.	FROM	BY WHOM.
Shelby	Mullengett, P.....	white	Jan. 10, '83	15 years to	8. Gov. Alvin Hawkins.
Davidson	Allen, John, alias Gomer.....	white	Jan. 10, '83	"	9. Gov. Alvin Hawkins.
Shelby	Reed, John.....	white	Jan. 10, '83	5	3. Gov. Alvin Hawkins.
Monroe.....	Byrd, Wm.....	white	Jan. 10, '83	9	5. Gov. Alvin Hawkins.
Davidson.....	Branch, Cad.....	white	Jan. 10, '83	15	9. Gov. Alvin Hawkins.
Madison	Romans, Warren.....	colored	Jan. 12, '83	15	10. Gov. Alvin Hawkins.
Davidson.....	Schooley, Geo. E.....	white	Jan. 13, '83	5½	4½. Gov. Alvin Hawkins.
Rutherford....	Slaughter, Heck.....	white	Jan. 13, '83	41	21. Gov. Alvin Hawkins.
Henry	Rugh, W. E.....	white	Jan. 13, '83	17	13. Gov. Alvin Hawkins.
Shelby	Johnson, E. H.....	white	Jan. 13, '83	21	16. Gov. Alvin Hawkins.
Fayette.....	Wills, Henry.....	colored	Jan. 13, '83	21	10. Gov. Alvin Hawkins.
Tipton	Scott, Jordan.....	colored	June 4, '83	1	¾. Gov. William B. Bate.
Campbell.....	Easley, W.....	colored	Jan. 22, '84	Hang. to Life.	Gov. William B. Bate.
Boane.....	Nave, John.....	white	April 30, '84	3	1. Gov. William B. Bate.

Total..... 14

**COUNTIES WHERE CONVICTS WERE SENTENCED, AND NUMBER
FROM EACH COUNTY.**

COUNTY.	NO.	COUNTY.	NO.
Anderson	5	Henderson	4
Bedford	25	Henry	8
Benton.....	4	Hickman.....	2
Bledsoe.....	0	Houston	5
Blount	4	Humphreys.....	2
Bradley	10	Jackson	9
Campbell.....	10	James	2
Cannon.....	6	Jefferson.....	7
Carter	6	Johnson.	5
Carroll	6	Knox.....	47
Cheatham.....	4	Lake.....	3
Chester.....	3	Lauderdale	12
Claiborne	5	Lawrence	10
Clay.....	1	Lewis.	0
Cocke	1	Lincoln	21
Coffee	1	Loudon	2
Crockett	15	Macon	1
Cumberland.....	2	McMinn	4
Davidson.....	221	McNairy	13
Decatur.....	2	Madison	56
DeKalb	6	Marion	8
Dickson.....	5	Marshall	13
Dyer.....	14	Maury	50
Fayette	28	Meigs.....	2
Fentress.....	2	Monroe	5
Franklin	12	Montgomery	22
Gibson.....	21	Moore.....	2
Giles.....	21	Morgan.....	6
Grainger	2	Obion	9
Green.	13	Overton.....	1
Grundy	3	Perry.....	0
Hamblen	12	Pickett	1
Hamilton	45	Polk	2
Hancock.....	2	Putnam	6
Hardeman.....	33	Rhea	6
Hardin... ..	2	Roane	9
Hawkins	10	Robertson	4
Haywood.....	33	Rutherford.....	27

**COUNTIES WHERE CONVICTS WERE SENTENCED, AND NUMBER
FROM EACH COUNTY.**

COUNTY.	NO.	COUNTY.	NO.
Scott	4	Union	2
Sequatchie	0	Van Buren.....	0
Sevier	5	Warren.....	5
Shelby	221	Washington.....	10
Smith.....	2	Wayne.....	2
Stewart.....	5	Weakley	8
Sullivan.....	7	White	1
Sumner	10	Williamson	18
Tipton	25	Wilson.....	12
Trousdale	3		
Unicoi	2	Total.....	1323

NATIVITY OF PRISONERS.

WHERE BORN.	NO.	WHERE BORN.	NO.
Alabama.....	58	New Jersey.....	3
Arkansas.....	5	New York.....	14
Florida.....	1	Ohio.....	13
Georgia.....	60	Pennsylvania.....	3
Illinois.....	13	South Carolina.....	18
Indiana.....	4	Texas.....	1
Iowa.....	2	Tennessee.....	839
Kentucky.....	60	Virginia.....	77
Louisiana.....	10	Canada.....	4
Massachusetts.....	3	England.....	5
Maryland.....	3	Germany.....	5
Mississippi.....	59	Ireland.....	12
Missouri.....	11	Isle of Corsica.....	1
North Carolina.....	37		
Total.....		1,323	

RELIGION OF PRISONERS.

Baptists (Missionary).....	99	Episcopalians.....	3
Methodists.....	51	Hebrews.....	2
Catholics.....	21	Lutherans.....	1
Presbyterians.....	5	No religion.....	1,138
Christians.....	3		
Total.....		1,323	

TRADE OR OCCUPATION WHEN ENTERED.

TRADE OR OCCUPATION.		TRADE OR OCCUPATION.	
Artist.....	1	Moulder	8
Baker	3	Painter	17
Barber.....	12	Physician.....	1
Blacksmith	36	Printer	1
Book-keeper.	2	Railroader	3
Brickmason	4	Saddler	2
Butcher	4	Sailor.....	1
Cabinet-maker	6	Salesman	1
Carpenter.....	24	Ship-carpenter	1
Cooper.....	5	Shoemaker	16
Dentist	1	Stonemason.....	5
Draftsman.....	1	Tailor	3
Engineer	7	Teacher.	1
Gas-fitter.....	2	Tinner.	2
Harness-maker.	2	Varnisher	1
Lawyer.....	2	Wagan-maker	5
Machinist.....	5	No trade	1135
Merchant	2		
Miller	1	Total	1323

GENERAL INFORMATION.

SOCIAL RELATION.

There are in the different prisons, Married persons.	279
Widowers.....	35
Single	1,009
Total.....	1,323

EDUCATION.

Good.....	87
Limited.	268
Small.....	55
None.....	913
Total.....	1,323

NUMBER OF WHITE AND COLORED PRISONERS.

IMPRISONED AT	WHITE	COL'ED	TOTAL.
Main Prison.....	224	304	528
Tracy City.....	73	363	436
Inman.	40	137	177
Coal Creek.....	68	93	161
Dr. Morrow's farm		21	21
Total.....	405	918	1,323

NUMBER OF PRISONERS NOW UNDER 21 YEARS OLD.

Main Prison.....	54
Tracy City.....	102
Inman.....	45
Coal Creek.....	27
Dr. Morrow's Farm.....	8
Total.....	236

10—Prison.

NUMBER OF MALES AND FEMALES.

Males.....	1,268
Females.....	55
Total.....	<u>1,323</u>

PRISONERS FOR LIFE (MAIN PRISON).

Males.....	46
Females.....	1
Total.....	<u>47</u>

THE OLDEST PRISONER.

Eli Beddings, from Maury county, was sentenced June 3, 1867, for life. He has served 17 years and 6 months.

PRISONER HAVING LONGEST TIME TO SERVE, OUTSIDE OF LIFE SENTENCE.

Sam Armstrong, colored, from Davidson County, was sentenced in September, 1878, for 46 years.

CRIMES, AND NUMBER OF EACH.

Abduction.....	2	Gaming.....	1
Attempt to Poison.....	1	Grand Larceny.....	216
Arson.....	19	Horse-stealing.....	66
Assault to Murder.....	72	Incest.....	4
Assault to Rape.....	22	Involuntary Manslaughter...	15
Begetting Child on Body of Wife's Sister.....	1	Kidnapping.....	1
Bigamy.....	6	Larceny from Person	21
Bringing Stolen Property into the State.....	1	Malicious Stabbing.....	20
Buggery.....	2	Marrying Wife of Another..	1
Burglary	82	Mayhem.....	2
Burglary and Larceny.....	95	Murder.....	139
Counterfeiting.....	1	Obstructing Railroad.....	6
Crime against Nature.....	1	Perjury.....	17
Embezzlement.....	1	Petit Larceny.....	356
Entering premises of another in Disguise.....	1	Poisoning Stock.....	2
Extorting Money.....	1	Rape and Arson.....	1
False Pretense.....	15	Rape.....	29
Felonious Assault.....	17	Receiving Stolen Goods.....	8
Forgery.....	26	Rescue.....	1
Fraudulent Breach of Trust.	9	Robbery.....	27
		Taking Female for Prostit'n	2
		Voluntary Manslaughter.....	13
Total.....		1,323	

**TABLE SHOWING THE TERM OF SENTENCE AND
NUMBER OF EACH.**

NUMBER OF PRISONERS.	DURATION OF SENTENCE.	TOTAL.		NUMBER OF PRISONERS.	DURATION OF SENTENCE.	TOTAL.	
		YEARS.	MO'S.			YEARS.	MO'S.
138	1	138	...	108	10	1080	...
1	1½	1	3	5	11	55	...
16	1½	24	...	1	11¾	11	9
1	1½	1	11	10	12	120	...
122	2	244	...	1	12½	12	6
1	2½	2	4	10	13	130	...
8	2½	20	...	1	13½	13	6
1	2¾	2	9	6	14	84	...
321	3	963	...	44	15	660	...
5	3½	17	6	8	16	128	...
1	3¾	3	9	1	16½	16	6
69	4	276	...	4	17	68	...
3	4½	13	6	5	18	90	...
1	4¾	4	9	1	19	19	...
169	5	845	...	37	20	740	...
1	5½	5	6	12	21	252	...
55	6	330	...	1	22	22	...
1	6½	6	6	1	23	23	...
38	7	266	...	1	24	24	...
1	7½	7	6	1	25	25	...
1	7¾	7	8	1	27	27	...
40	8	320	...	1	33	33	...
3	8½	25	6	1	46	46	...
16	9	144	...				
Aggregate time of service.....						7350	8

Number of life-time prisoners..... 47.

REPORT OF THE DEPUTY WARDEN.

To His Excellency, Wm. B. Bate, Governor of Tennessee; Atha Thomas, Treasurer; P. P. Pickard, Comptroller, and D. A. Nunn, Secretary of State, Inspectors of Prisons.

GENTLEMEN:—I most respectfully submit to you this my biennial report, commencing December 1, 1882, and ending December 1, 1884. For better information I refer you to the accompanying index.

I came to the main prison February 1, 1882. The law makes the Deputy Warden of the main prison also book-keeper of the whole, and as such I at once took charge of the books and records. We had a great deal of difficulty to encounter in establishing a firm basis for our future work. This has been done, first, by taking the actual number of the prisoners on hand, comparing the names with the original transcripts, and adopting a new system of book-keeping. Every man, from the day the present officials came here, you will find accounted for.

I have also made different accounts of the several prisons, as the report will more fully show. I have been greatly aided in this work by Col. Carter, Capt. Harris and the Deputy Wardens of the branch prisons. Without the help of the latter it would be impossible to keep a correct account. They have responded promptly to all my demands; their weekly and monthly reports have been made regularly and correctly.

Before I close, I wish to call your attention to the imperfections of the "good time law." As it now is, it is full of uncertainties. A law should be framed which every one could easily understand, and should be more liberal to the man whose time is over ten years.

I would also call your attention to the condition of the discharged prisoners. Without a cent of money, under adverse circumstances,

forced to face stern necessities, they very often are compelled to haunt the abodes of vice again to satisfy the most urgent wants, and no doubt look back to this prison as the children of Israel did of old, casting back longing looks after the flesh-pots of Egypt. A law allowing every prisoner to have as much as five, or even as low as two, dollars for every year served, paid to him by the State on the day of his discharge, should be passed. This, I think, would be nothing more than just, and would, prevent a repetition of small offenses and consequent return to prison, and would cost the State but a trifling sum.,

I am, most respectfully,

F. H. CRASS, *Deputy Warden.*

REPORT OF THE SUPERINTENDENT.

To WM. B. BATE, *Governor*, ATHA THOMAS, *Treasurer*, P. P. PICKARD, *Comptroller*, and D. A. NUNN, *Secretary of State*,
Inspectors Tennessee Penitentiary:

GENTS: I have the honor of submitting this, my Biennial Report, as Superintendent of the Prisons of the State. I have visited them all regularly, and devoted my entire time to the management and control of the same.

During my administration there has been erected a comfortable and well-constructed cell-building and wash-houses for the females at the main prison; have also ventilated the male wings and cells at the main prison. This expenditure of the State's funds was very badly needed indeed.

There has been erected a large, commodious and well-located prison at Tracy City. The prison at Coal Creek has been enlarged and otherwise improved. The branch prisons of Star Coal Mine, Knoxville & Ohio Railroad Tunnel, and Ensley farm have all been discontinued. The prisoners of the former were transferred to Coal Creek, and those of the two latter to Tracy City. Most of the Ensley farm prisoners were afterwards taken to Inman ore bank, in Marion county, where good, comfortable quarters have been erected for Inman branch prison. A few prisoners still remain at the Spence (now Dr. Morrow's) farm, nine miles from this city.

The prisoners have all been properly treated, fed and clothed. Proper medical attention has been furnished them, and yet the mortality has been great, as the Deputy Warden's mortuary report shows. A great many come to the Penitentiary badly diseased, and die in a short while. A good many inherit the disease, while others bring it on by their degraded habits; and quite a large

number become diseased from long confinement in the badly-constructed and poorly ventilated jails of our counties.

Tracy City is headquarters for the Tennessee Coal, Iron & Railroad Company, who are the present lessees of the Penitentiary. They work and control sixty per cent. of the entire prison force, and sub-lease the remainder (including all mechanics) to Cherry, Morrow & Co.

In August and September, 1883, all the diseased and deadheads of the main prison that could be removed were transferred to Tracy City and Inman; and then all the diseased and broken-down prisoners that accumulate at Coal Creek are transferred to Tracy City. This is the cause of more deaths occurring at these two prisons than any others.

I beg leave to call your attention to the importance of the State providing a house of correction for all criminal boys, and thereby preventing them being sent to the Penitentiary, where their associates are hardened criminals.

I would most respectfully beg leave to call your attention to the extremely low salary of the Deputy Warden at the main prison. He is compelled to devote his entire time to the books of the Penitentiary without *any* perquisites whatever. I respectfully refer you to the reports of the Warden, Deputy Warden, Surgeon and Chaplain. And I especially call your attention to the elaborate and accurate statistical report of the Deputy Warden.

In conclusion, I will say that I have kept the buildings, shops and all the other property of the State in as good repair as their ancient condition will admit.

Very respectfully,

JAS. E. CARTER, *Supt.*

REPORT OF THE PHYSICIAN.

TENNESSEE STATE PENITENTIARY,
NASHVILLE, TENN., Dec. 15, 1884. }

COL. JAS. E. CARTER, *Superintendent of Prisons*:

MY DEAR SIR: In submitting the following report as Surgeon and Physician to the Tennessee State Penitentiary, or main prison at Nashville, for the two years ending December 1, 1884, I would respectfully state that I entered on duty on the 8th day of May, 1883, and that the portion of the report embraced in the period, from December 1, 1882, to May 8, 1883, a little over five months, is made up from the very full and correctly kept records of my predecessor, Dr. J. M. Kercheval.

The health of the Prison has been quite as good, if not better, than in preceding years. More especially has there been a marked improvement during the last twelve months, which I attribute mainly to the more perfect ventilation of the cells and the corridors or wings containing them—the improved ventilation consisting in making a grated opening at the lower part of each cell door, 18 by 8 inches, thus giving a more efficient and certain circulation of the air of the cells than could have been afforded by the single grated opening originally constructed at the upper part of the cell doors; thoroughly cleaning out the ventilating flues in the rear of each cell, and connecting them with a series of very ingenious ventilating devices passing out through the roof of the corridors or wings, similar devices being also located at suitable places in other parts of the roof of the corridors or wings not occupied by the cells; this system of ventilation having been arranged and put up under the supervision of Mr. W. H. Cusack, architect. By these ar-

rangements, a much greater supply of fresh air has been secured for the inmates of the prison during the time they were not engaged at labor. The cells are notably deficient in air space, those of Wing No. 1, the oldest part of the prison, erected in 1828, being only 6 feet 11 inches by 3 feet 4 inches by 7 feet 2 inches, a total of about 160.04 cubic feet; those of Wing No. 2, a later addition to the prison, being 7 feet by 3 feet 5 inches by 7 feet 1 inch, a total of about 168.43 cubic feet, and those of Wing No. 3, the most recent addition, being 7 feet 4 inches by 5 feet by 8 feet 7 inches, a total of about 314.43 cubic feet. These cells were originally designed for only one occupant, and the allowance of air-space was even too small for one; yet, in many instances, it has been necessary to have the cells occupied by two inmates, there being only 360 cells in all.

Among the zymotic diseases, I have to record an outbreak of smallpox, which commenced on the 3d day of March, 1883, the last case being discharged from hospital and returned to duty on the 15th day of May following. There was a total of nine cases, with one death. Since the time above mentioned no other case has occurred, notwithstanding this disease prevailed in Nashville and vicinity, and in other parts of the State, for more than a year following.

In this connection, I would state that immediately after entering on duty I vaccinated and re-vaccinated every inmate of the prison, until satisfied that they were protected, as well as vaccinating all who were subsequently received at the prison. By this means, together with isolation of the cases which occurred—they having been moved without the prison, and beyond the city limits—and a rigid quarantine of the prison during the prevalence of smallpox in the city and suburbs, the disease was arrested, and its recurrence, so far, prevented. Acknowledgments are hereby tendered to the lessees of the prison, the Warden, and other officers, for their hearty and cordial co-operation in any suggestions made looking to this end.

Of the other diseases which have occurred, they will be seen, by reference to tables "A" and "B," to be such as are incident to this locality, and the class of individuals composing our convict population, occurring in about the same proportion, both as to character and mortality, as in the same class of individuals in this locality.

Owing to the deficiency of hospital arrangements, only the more

serious cases of illness have been treated in hospital, the lighter cases having been treated in their cells or dormitories. The hospital consists of two rooms, or wards, one immediately over the other, in the second and third stories of the main building. Each room is 38 feet long by 28 feet wide, with ceiling 8 feet 9 inches high, with windows only on the north and south sides. Table "C" gives the average number of patients in hospital, and the average number excused from duty by reason of sickness, daily, each month. By reference thereto, the improvement in the health of the prisoners is apparent.

The total mortality during the two years has reached the number of 43. For the two years ending December 1, 1882, it was 51, and the two years ending 1880, it was 54, as will be seen by reference to the biennial reports of those years. The largest number of deaths from any one cause is due to phthisis pulmonalis, or consumption, of which there were 10, three of which occurred in less than 3 months after reception at the prison. Pneumonia is next on the list, with a total of 6 cases. Twelve cases, or three-fourths of all the deaths due to these diseases of the lungs, occurred during the first twelve months covered by this report, and I can clearly see a marked improvement in this respect, to be attributed to the improved ventilation of the cells and corridors. Two deaths occurred from violence—the first, a female convict, was stabbed with a knife in the hands of another female convict, the knife having been secretly taken from the coat of a workman hanging in the yard occupied by the females, the workman being employed in the construction of the new dormitories for the female convicts; the other case was due to gun-shot wounds at the hands of the officers of the prison, in endeavoring to quell a mutiny on the part of one of the most dangerous and desperate prisoners. A coroner's jury was impaneled, and verdict rendered in each instance.

In regard to the mortality, I desire to state that many of the convicts, when received at the prison, are badly broken down in a physical point of view. A life of vice and crime is not conducive to health, and many of them, owing to the tedious delay of the courts, come to the prison after many months' confinement in the various county jails, but few of which are constructed in accordance with the crudest ideas of recognized sanitary precautions.

The clothing of the prisoners has been uniformly good, suffi-

ciently warm in winter, with lighter suits for summer wear, a weekly change of garments being made throughout the year. The blankets and bedding are adequate; the cells are kept clean and frequently whitewashed; the work-shops are comfortably warm in winter, and, with one exception, are well ventilated, and as cool as could be expected during the summer months—the exception being the blacksmith shop, which, unfortunately, consists of the lower or ground floor of a two-story building, the upper floor being used for a paint-shop. While the ceiling of the blacksmith-shop is quite high, with an ample number of sufficiently large windows, it is not ventilated at the top. It should have been only a one-story building, with properly constructed openings at the eaves and comb of the roof for the escape of dust, smoke and noxious gases that naturally arise from forging iron. I would most respectfully recommend and suggest that an additional building be erected for this purpose, regarding it a most important sanitary necessity. The windows in the present shop do not reach the ceiling by about four feet. I have suggested the making of openings between the windows at the bottom of the floor above, or extending the windows up to that point, but have been met by the suggestion that it would so weaken the walls as to endanger the building. The effort at getting rid of the accumulated dust, smoke and gases by means of flues in the centre of the shop, passing through the room above and thence out the roof, has not yet proven effective.

The diet of the prisoners is ample in quantity, sound and wholesome in quality, and suitable to working men. For breakfast, coffee, salt pork, bacon, or fresh beef, and well-cooked corn-bread. For dinner, corn-bread, salt pork, bacon, or beef, and vegetables, in their season; tomatoes, green corn, sweet and Irish potatoes, cabbages and onions in summer, with potatoes, cabbages, turnips, dried peas or beans and onions in winter. For supper, corn-bread, with molasses or buttermilk. For debilitated, feeble or dyspeptic convicts, a special "light diet list," consisting of soup, with light-bread in addition to the above, is ordered; the hospital diet being such as I have made special requisition for each day, embracing such articles as beef or chicken soup, rice, sweet milk, eggs, chickens, etc., which has been frequently supplemented by delicacies and extra articles of food sent from the Warden's table.

The drugs, medicines and surgical instruments and appliances

furnished by the lessees, have been ordered from the leading wholesale drug houses of Nashville, principally from the well-known and reliable house of Messrs. Berry, Demoville & Co., whenever I have made requisition for them, and have been in every instance first-class in quality and condition.

The night-soil is removed daily by means of air-tight barrels. From repeated and frequent inspections I have ever found the confines of the prison, the yard, work-shops, cells and corridors, thoroughly policed and cleaned each day.

The character of the work, and the amount exacted each day, is not beyond the ability of any of the prisoners.

The enlargement of the pool in the centre of the yard is beneficial and of no little value in increasing the reserve supply of water on hand in case of fire, but has been the means of enabling the prisoners to bathe more frequently and keep their persons clean during the summer months, a sanitary measure of no little value. I would beg leave to suggest and earnestly recommend that an appropriation be secured, if possible, to provide suitable bathing facilities for use during the winter season.

The lessees have rendered me their most hearty co-operation in each and every suggestion I have made for the comfort and health of the prisoners. All requests, whether written or verbal, in regard to the character of work suited to each prisoner's physical ability, the diet, clothing, etc., have been cordially and unhesitatingly granted, and I desire to tender them, through you, my sincere thanks for their uniform courtesy and the marked deference they have paid to my every suggestion.

I also desire to express my thanks to Professors Duncan and Paul F. Eve, M. D., Professor J. G. Sinclair, M. Dr., Dr. D. C. Day, and J. P. Rucker, M. D., for material professional assistance rendered in occasional emergencies.

I also desire to acknowledge with gratitude the exceedingly pleasant and agreeable official intercourse with Captain F. S. Harris, Warden, Captain F. H. Crass, Deputy Warden, and the other officials, guards and attendants of the prison, and yourself, during the time I have been on duty.

Very truly and respectfully, your obedient servant,

DEERING J. ROBERTS, M. D.,

Surgeon Tennessee State Prison.

TABLE A.—LIST OF DISEASES TREATED IN HOSPITAL.

Abscess.....	1
“ Lumbar.....	1
“ Perineal.....	3
“ Psoas.....	1
Amputation of arm.....	1
“ “ fingers.....	7
“ “ shoulder.....	1
“ “ leg.....	1
“ “ thigh.....	1
“ “ toes.....	1
Anæmia.....	1
Aneurism, thoracic.....	1
Ascites.....	2
Asthma.....	2
Bright's disease, chronic.....	1
Bronchitis, acute.....	6
“ chronic.....	3
Cancer of heart, lungs and mediastinum.....	1
Caries of tibia.....	1
Cerebral Meningitis.....	1
Cerebro-spinal Meningitis.....	2
Cirrhosis of liver with dropsy.....	2
Cystitis.....	2
Debility, general.....	6
Diarrhœa, acute.....	23
“ chronic.....	4
Dysentery, acute.....	10
“ chronic.....	4
Dropsy.....	1
“ cardiac.....	1
“ hepatic.....	2
Epididymitis.....	1
Erysipelas.....	1
Excision of fibrous tumor.....	2

Fecal Impaction.....	2
Fever, catarrhal.....	5
" congestive remittent.....	2
" intermittent.....	6
" remittent.....	27
" typhoid.....	5
" typho-malarial.....	1
Frost bite.....	1
Gastric ulcer.....	1
Gonorrhœa.....	7
Fistula in ano.....	3
Fracture of clavicle.....	1
Hernia.....	13
Hip joint disease.....	1
Inflammation of stomach and bowels.....	1
Inguinal bubo.....	1
Insanity.....	3
Marasmus.....	2
Nephritis, chronic.....	1
Neuralgia.....	9
Neurasthenia.....	1
Otorrhœa.....	2
Pericarditis with effusion.....	1
Phalanges, fracture of.....	2
Pneumonia, acute.....	25
" typhoid.....	1
Phthisis pulmonalis.....	16
Pulmonary hemorrhage.....	2
Rheumatism, acute.....	4
" chronic.....	3
Scrofula.....	2
Smallpox.....	9
Synovitis of knee-joint.....	2
Tuberculosis of bowels.....	2
Tumor of sterno-clavicular region.....	1
Ulcer of leg, chronic.....	4
Vaccinal ulcer.....	2
Valvular disease of heart.....	2

Wounds, gunshot.....	3
“ incised of chest and arm.....	1
“ “ “ face and breast.....	1
“ “ “ fingers.....	9
“ “ “ leg.....	1
“ “ “ scalp.....	1
“ contused and lacerated, of hand.....	3
“ “ of head.....	4
“ punctured, of hand.....	2
“ “ “ foot.....	1

TABLE B.—Record of Deaths from December 1, 1882, to December 1, 1884.

NAME.	Age.	Sex.	County Sent From.	Date of Reception at Prison.	Date of Death.	Cause of Death.
1 Lipcomb, William.....	39	C.	M.	Shelby.....	September 27, 1881.	Typho-malarial fever. (?)
2 Wilson, James.....	31	W.	M.	Davidson.....	February 16, 1882.	Pneumonia.
3 Summerville, James.....	31	W.	M.	Robertson.....	October 16, 1882.	"
4 Poindeexter, Sherman.....	13	C.	M.	Montgomery.....	January 20, 1882.	Cerebro-spinal meningitis.
5 Stewart, Dock.....	40	C.	M.	Weakley.....	November 5, 1882.	Phthisis pulmonalis.
6 Epperson, John A.....	26	W.	C.	Knox.....	October 6, 1880.	Abscess of lung, and fistula.
7 Pitts, Lucy.....	29	C.	F.	Hardin.....	May 16, 1880.	Pneumonia.
8 Carter, Alfred.....	26	C.	M.	Crockett.....	January 10, 1882.	Smallpox.
9 Newcom, Benj.....	33	C.	M.	Haywood.....	November 12, 1881.	Inflammation of stomach & bowels.
10 Davis, W. C.....	30	W.	M.	Shelby.....	April 8, 1883.	Phthisis pulmonalis.
11 Peppers, Albert.....	24	C.	M.	Giles.....	January 25, 1883.	"
12 Deford, W. H.....	22	C.	M.	Madison.....	November 10, 1880.	Congestive remittent fever.
13 Talliaferro, Matt.....	28	C.	M.	Landon.....	January 29, 1879.	Cystitis and marasmus.
14 Pickett, Daniel.....	63	C.	M.	Madison.....	February 12, 1883.	Pneumonia.
15 Ballard, Alf.....	24	C.	M.	Madison.....	October 23, 1882.	Typhoid fever.
16 Brazell, Simon.....	36	C.	M.	Hardeman.....	December 6, 1882.	Pericarditis, with effusion.
17 Brown, W. M.....	24	C.	M.	Rutherford.....	August 25, 1882.	Phthisis pulmonalis.
18 Hill, Henry.....	55	C.	M.	Maury.....	October 19, 1881.	Dysentery.
19 Dinwood, Mollie.....	23	C.	F.	Obion.....	March 29, 1883.	Stabbed by another convict.
20 Faris, T. E.....	53	W.	M.	Maury.....	June 14, 1883.	Remittent fever.
21 White, Ananias.....	50	C.	M.	Davidson.....	October 2, 1877.	Phthisis pulmonalis.
22 Whitaker, Geo. W.....	27	W.	M.	Putnam.....	January 6, 1883.	Dysentery.
23 Hoard, Richard.....	40	W.	M.	Hawkins.....	October 2, 1877.	Phthisis pulmonalis.
24 Buchanan, Henry.....	40	C.	M.	Crockett.....	June 10, 1882.	"
25 Webster, Hunter.....	20	C.	M.	Maury.....	June 10, 1882.	"
26 Merrivether, Phil.....	26	C.	M.	Madison.....	March 3, 1877.	Uremic poisoning.
27 Davidson, Noah.....	40	W.	M.	Jefferson.....	August 2, 1877.	Chronic bronchitis.
28 Barker, James.....	16	C.	M.	Stewart.....	August 29, 1882.	Pneumonia.
29 Bason, William.....	19	C.	M.	Madison.....	June 25, 1883.	Cirrhosis of liver and dropsy.
30 Farley, J. De.....	28	W.	M.	(Gibson.....	August 15, 1881.	Pneumonia.

TABLE B.—*Record of Deaths from December 1, 1882, to December 1, 1884—Continued.*

No.	NAME.	Age.	Color.	Sex.	County Sent From.	Date of Reception at Prison.	Date of Death.	Cause of Death.
31	Johnson, Archie.....	31	C.	M.	Montgomery	June 20, 1882.	1884—April 20.	Thoracic aneurism.
32	Coldwell, Thomas.....	40	C.	M.	Williamson...	October 30, 1879.	May 15.	Psoas abscess.
33	Richmond, Lon.....	25	C.	M.	Trousdale.....	December 23, 1883.	May 15.	Ascitis and chronic peritonitis.
34	Doakes, Wm.....	19	C.	M.	Rutherford ...	December 16, 1882.	May 29.	Cancer heart, lungs & mediastinum.
35	Mallaby, Jacob.....	27	W.	M.	Campbell.....	November 25, 1882.	July 10.	Typhoid fever.
36	Gardner, Bettie.....	43	C.	F.	Davidson.....	February 28, 1881.	July 26.	Chronic diarrhoea.
37	Jernigan, Joe.....	23	C.	M.	Union	July 10, 1879.	July 28.	Cerebral meningitis.
38	Bills, Wm.....	22	C.	M.	Hardeman ...	August 1, 1883.	August 8.	Phthisis pulmonalis.
39	Nunn, Thos... ..	36	W.	M.	Campbell	November 19, 1877.	August 29.	"
40	Watson, James.....	15	C.	M.	Davidson.....	February 29, 1884.	September 9.	Typhoid fever.
41	Collins, Wm.....	23	C.	M.	Montgomery	June 7, 1884.	October 1.	Tuberculosis of bowels.
42	White, Cesar.....	31	C.	M.	Madison.....	March 5, 1883.	October 10.	Shot by guards.
43	Welsh, John.....	46	C.	M.	Lauderdale ...	June 10, 1882.	November 3.	Cirrhosis of liver and dropsey.

**TABLE C.—AVERAGE NUMBER OF PATIENTS IN HOSPITAL AND
EXCUSED FROM DUTY DAILY, EACH MONTH.**

MONTH.	YEAR	EXCUSED	IN HOSPITAL.
December... ..	1882	7.02	11.22
January.....	1883	11.70	15.16
February... ..	"	12.39	17.57
March	"	13.70	18.80
April.....	"	8.33	17.90
May.....	"	9.45	14.77
June.....	"	6.70	11.96
July.....	"	5.96	14.41
August.....	"	7.51	11.38
September.....	"	6.20	10.10
October.....	"	6.64	12.66
November.....	"	2.13	10.86
December... ..	"	3.96	7.58
January.....	1884	3.48	10.41
February.....	"	4.03	9.41
March... ..	"	4.22	10.77
April.....	"	7.66	11.53
May.....	"	4.09	11.09
June... ..	"	3.30	9.83
July.....	"	6.16	13.54
August.....	"	2.41	12.80
September.....	"	1.40	8.13
October... ..	"	2.22	9.16
November.....	"	1.96	8.40

REPORT OF THE CHAPLAIN.

NASHVILLE, TENN., December 27, 1884.

COL. J. E. CARTER, *Superintendent of State Prison*:

SIR: I received my commission March 24, 1884, and entered at once upon the discharge of my duties as Chaplain of this State Prison.

Most scrupulously, and with all my ability I have been at my post and work, according to the law and the custom governing the conduct of the Chaplain of this prison, in every particular in which it was in my power.

I herewith present my views about a Reform School, and will ask at the proper time, to present to the Committee on the Penitentiary my views about a Board of Pardons and Reform, and also other matters, if it may be found to be important for the General Assembly to consider them in making laws to govern our State Prison.

REFORM SCHOOLS—RECOMMENDATIONS TO THE GENERAL ASSEMBLY.

This word "reform" suggests the nature of these schools, where criminals of reformable years, twenty-and under, and who have been adjudged to be criminals by the State tribunal, are placed to be reformed. It is conceded to be a prime duty of the State to protect society from criminals, first by confining them, and second by so reforming them during their confinement that when released they will not repeat their offenses. Common sense and experience have taught us to attempt this reformation of young criminals by

guards, teachers, rules and regulations on grounds and in buildings apart from older offenders.

In no proper sense is our General Assembly a board of charities. The people of Tennessee have not placed any money here to be dispensed as gifts of their benevolence. Asylums for the blind and the deaf are exceptions only in appearance. The asylum for lunatics and the penitentiary, in the light in which the Tennessee Assembly acted in creating them, are not charities, but institutions to protect society from criminals and her lunatics. The instant the officer lays his hand on the young offender in the name of the State the "reform school" by the State becomes a duty to society by the State. The fact that seventy-five out of each one hundred are reformed in these schools presses the demand for them on the conscience of all enlightened law-makers.

Certainty of punishment is its chief deterring element, and in its presence [certainty] the young will pause when older persons, more fertile in finding ways of escape, go right on in wrong-doing.

If the Reform School, instead of the horrors of jails and penitentiaries, were before the officers of the law in the promptness and certainty of their actions, they would be clothed with much power to deter the young from their first steps in vice. Young sinners are wonderfully quick to discern the hesitancy and mistaken kindness of the officers and courts, and to use it to their undoing. The success of State schools of reform has been placed beyond doubt in many of our States. No intelligent citizen, taking in his mind our population and wants, and looking to other States where these schools have been established and proven to be so great benefits to society, will ask, we think, of our General Assembly less than three hundred thousand dollars to be invested in grounds and buildings—about one hundred thousand to each division. These appropriations to be annual, for not less than five years, and perhaps more wisely extending to ten years.

But in this case the first one hundred thousand dollars will take in the extent of buildings and amplitude of grounds needed in the end. Thus our State may start side by side with the most advanced of our sister States, profiting by their experiences. Homes, houses of refuge, industrial schools, etc., are institutions founded by local, personal or church charity, intended to supply the place of parents dead or worse than dead. "Sinned against," not "sinning," "un-

fortunate," not "criminal," is ever written over the entrance to such establishments. Their charters and by-laws wisely and positively forbid the admission of State criminals to companionship with their beneficiaries. Their officers intermeddle in families and concern themselves in personal rights in a manner which no wise, conservative statesman will ever allow to be done in the name of his State.

These noble charities, guided by the conscience and sustained by the contributions of private citizens, are local organizations, are an honor to their liberal founders and a blessing to society, but are not intended, and they can never take, the place of the reform school by the State and at the cost of the State.

Under their shadow, where public schools and Sunday-schools do their best work, the State has been and will yet be compelled to make criminals of minors, and, without the reform school, be compelled to place them in this penitentiary, where their condition is such that if seen there is not a Christian citizen who would not lift up his hands and swear, "O! God, I am not a citizen of a State which allows little boys to be treated in such a manner." There is no single fact which should so alarm our Christian statesmen as the fearful increase in the number of these young criminals, at present over 400.

I do, therefore, most solemnly entreat the members of this present General Assembly to give the reform school the attention all agree it demands, and now, to take some first step in a system of reform worthy our continent-renown as a State.

C. D. ELLIOTT, *Chaplain.*

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ERRATUM.—On page 64 in head line, for "Tracy City" read Inman.

BIENNIAL REPORT

OF THE

BOARD OF TRUSTEES

OF THE

University of Tennessee

TO THE

GENERAL ASSEMBLY OF THE STATE,

DECEMBER 27, 1884.



NASHVILLE:

ALBERT B. TAAEL, PRINTER TO THE STATE.
1885.

UNIVERSITY OF TENNESSEE, STATE AGRICULTURAL COLLEGE, }
KNOXVILLE, TENNESSEE, December 27, 1884. }

His Excellency WILLIAM B. BATE, *Governor of Tennessee:*

DEAR SIR:—The biennial report of the Trustees of the University of Tennessee, and the report of the Treasurer of the institution, are herewith transmitted.

Very respectfully yours,

JOHN L. MOSES,
Chairman of the Board of Trustees.

REPORT OF BOARD OF TRUSTEES.

To the General Assembly of the State of Tennessee :

The trustees of the University of Tennessee respectfully present their biennial report.

The period that has elapsed since the date of our last report to your honorable body has been marked by faithfulness and efficiency of service on the part of the faculty, as well as by good deportment, application and improvement on the part of the pupils. In all these respects the institution has fully maintained, if it has not gone beyond, the high position it had previously reached. As expressive of a just estimate of what that position is, we take the liberty of quoting the language of an eminent and life-long educator of youth. He says:

"The University of Tennessee may point with pride to the work already done. Within the past fifteen years something over three thousand young men have been in attendance for longer or shorter periods. From the University they have gone out into all the industrial walks of life, carrying with them knowledge and skill in proportion to the length of their stay. A goodly number have found employment as civil or mining engineers, as architects or railroad officials. A very large proportion have found profitable mercantile situations. Many others are in successful management of farms, while a large number of the best trained and most gifted have been called to the leadership of schools in this and neighboring States. Almost invariably, they have been earnest, industrious young men, who have come to learn and gone to put their learning to practical use.

"The foremost institutions of the land—the Universities of Michigan, Cornell, Yale and Harvard—owe their prominence to the fact

that, having more money, they can employ more men and supply them with ampler equipment.

"Much of the work done in the University of Tennessee is not surpassed by that of any other institution in the land; and whenever any of the work falls short of the best, in scope or character, it is not from lack of ability or zeal in the workers, but that the field is disproportioned to the force employed and the means at command."

THE PRESIDENCY OF THE UNIVERSITY.

At the close of the session of 1882-3, Rev. Thomas W. Humes, S. T. D., who had been for eighteen years the honored head of the institution, and who has, through all the years of a long and useful life, commanded the respect which is due to talent, scholarship and moral worth, resigned the presidency of the University, and retired to private life.

The Board of Trustees thereupon determined to leave the presidency unfilled for the ensuing year, and gave power to the faculty to elect, from their own body, a chairman clothed with the authority and charged with the duties of a president. The faculty selected Prof. Rodas Massie for this position, under whose superintendence the new management was so successful that the board concluded to continue it through the current year, and the faculty re-elected Prof. Massie to the chairmanship.

OTHER CHANGES.

Since our last report the following changes have also been made in the corps of instructors:

Prof. S. H. Lockett, at the close of the session of 1882-3, resigned the professorship of applied mathematics, and the duties of that chair were assigned to Prof. Dinwiddie, professor of pure mathematics, and Lewis C. Carter, who was elected instructor in applied mathematics. At the same time, Wm. A. Noyes was elected professor of chemistry and mineralogy, in place of Wm. G. Brown, resigned.

Samuel B. Crawford, formerly commandant of cadets and instructor in mathematics and military science, is now professor of military science, commandant of cadets and adjunct professor of mathematics.

Thomas O. Deaderick, formerly instructor in ancient languages,

has been elected adjunct professor of ancient languages, John N. Bogart instructor in the preparatory department, and William I. Thomas instructor in modern languages and natural history.

COURSES OF STUDY.

Provision is made in the University for six full courses of study beside three shorter and three preparatory courses. Of the full courses the first is the agricultural. The pupil in this department is first introduced into the realm of vegetable life, and taught to observe, to analyze, and to combine facts pertaining to its development in all stages of its progress from the germ to the fruit—to note with care the conditions of its natural laws, and the modifications which are due to differences of climate and soil—to inform himself as to the selection, preparation and application of plant-food, to the end that the best results may be obtained through the exercise of muscle and mind. He learns the most approved methods of plant propagation by the proper use of seeds, cuttings, layers, buds and grafts. He is instructed as to the preparation of soils, including their irrigation and drainage, the cultivation of general crops, the culture of fruit, the construction of farm buildings, and the breeding and treatment of domestic animals—in short, so far as the resources of the institution and the purpose of the student allow, in every leading branch of general farming, dairy farming, truck farming and rural economy.

All students enjoy, in a greater or less degree, the benefit of instruction in this department, for, by a law of the University, all are required to devote a part of their time to the study of agriculture.

The importance of this subject justifies the presentation of the following extracts from a late report of Prof. J. W. Glenn, the head of the department, to the Board of Trustees :

“Three courses are open to students who wish to give special attention to agriculture—a very thorough course of four years, leading to the degree of Bachelor of Agriculture; a two years’ course, which secures a certificate, and a third course, requiring that half of each day shall be given to work on the farm, styled

“THE APPRENTICE COURSE IN AGRICULTURE.

“This is a course of two years, arranged for young men who can devote only a short time to study, and who wish to become practical

farmers. Students who enter as apprentices are taught by textbooks and lectures, the principles of agriculture during the forenoon of each day, and on the afternoons are given practice on the college farm.

"Liberal wages are paid to all cadets working on the farm, so that the earnings of the afternoons and Saturdays can meet most of the current expenses. Thus young men may almost, if not entirely, support themselves while acquiring a fair education, a good knowledge of theoretical farming, and superior skill in applying principles to practical agriculture.

"In this course students are instructed in botany, physics, practical agriculture, chemistry, mathematics and English. When working at the farm they are under the direction and instruction of the superintendent.

"Such a course is admirably arranged for those who have very limited means: indeed any young man with health, enterprise and energy can maintain himself in this course while preparing for success in the struggle for life and for eminence in the profession of his choice, where so few of the highly educated have sought for distinction.

" THE UNIVERSITY FARM

"Embraces about two hundred and fifty acres, and is located three-fourths of a mile west of the University. The eastern portion, on the Tennessee river, is now in a high state of cultivation. A considerable portion of the labor on this farm is performed by the cadets; and all of them are encouraged to visit the farm and study its practical workings. The various crops suited to the climate and soil are here cultivated, to illustrate the most approved methods. These crops have yielded satisfactory results and indicate that judicious farming will prove remunerative.

"A large space is devoted, each year, to experimental work, at a cost of \$2,000 or \$3,000 greater than the returns. Such operations, however, serve not only to instruct the young men, but, what is probably more important, they save farmers, in all parts of the State, from the heavy loss of testing new methods, new varieties, etc.

"New and promising breeds of stock are here kept, to test their real value and their adaptability to our climate and locality.

"Among the cattle, pure Jerseys, Devons and Short Horns have

had a place on the farm for several years past, and recently a choice Holstein cow, just imported, has been added to the herd.

"Three half-breed Percheron mares were purchased this fall. Berkshire, Poland-China and Red Jersey hogs have been long and carefully tested, and the University has contributed largely to introduce many of these best varieties into the State at greatly reduced prices.

"On the farm, there are now growing several thousand of the useful and ornamental trees, and in the gardens may be found almost every variety of fruit and vegetable, which promises any valuable results in the climate and soil of our State. The desire to aid the agriculture of the State by making the tests alluded to above, besides many others, gave rise to the

" EXPERIMENT STATION.

"During the twenty months since this station has been recognized by the proper authorities as the Experiment Station of the State, more than three hundred experiments have been made with various crops, fruits and vegetables, and most of these have been repeated. About thirty manures and fertilizers have been tested on the farm, and sixty-four commercial fertilizers have been analyzed at the laboratory of the station.

"Nearly thirty experiments have been made in cattle feeding for market, while others have been made to test the effects of varieties of food on milk and butter. Still others have been conducted to determine the relative value of silage and the various modes of ensilage. Many insecticides have also been examined and tried.

"The results of all the above experiments have been reported and published, and the publications, to the number of several thousand, have been distributed, free of expense, to every farmer in the State who expressed a desire to have them. And yet, these facts, important as they are, have reached a very small per centage of our people, because the University has not the means to publish and circulate them.

"It was hoped that when the members of the General Assembly of the State recognized the station in legal form they would supply the means of securing the good results which have come from such institutions in our sister States and in the countries of Europe.

"Germany has more than thirty such stations, and the whole

country is like a garden, supporting a population very many times more dense than ours, and yet producing a surplus.

"The University has not the means for performing the proper station work, or even half of it. Her income hardly provides for the free education of farmers' sons in the theory of farming, and very little is left for experimental work.

"It was hoped that the income from the inspection of commercial fertilizers would aid considerably in extending and improving the work at the station, but the net income has, thus far, been so small that it has hardly more than met the expense of analyses at the laboratory, and the cost of a limited number of fertilizers to be tested.

"This has left us nothing for the heavy item of labor and the fitting of laboratories, which have thus far been met by draft on the limited resources of the University.

"Analyses of crops, soils, minerals, foods, or other resources of the farm, require more means than we can command.

"To make the station what it ought to be, the State should make ample appropriation for each year's expenses. This will take several thousand dollars, and it is hoped that Tennessee will provide as liberally for the development of her vast resources, and for the education of her farmers, as any of her sister States which have already led off in this direction."

The following extracts from a faculty report to the Board of Trustees may appropriately be presented in this connection :

"The demands of modern civilization upon the University can no more be met by the paltry pittance that formerly kept alive the old-time college than the old-time stage-coach could do with the modern railroad.

"But it may be asked : Whence comes this enormously increased demand for University work, and, as a consequence, for University endowment ? The answer is not far to seek : It is a part of the same movement that gave rise to the new education ; it comes from every form of human industry ; not a mine or manufactory, not a farm, not a garden even, not a railway, or steamship, but is daily and hourly making its demand. From every nook and corner of the land or sea, where educated labor finds employment, the demand grows louder, and increases in volume and earnestness year by year, and must continue to increase for generations yet to come.

"The manufacturing product of a single year in the United States is estimated by the census as more than two thousand millions of dollars, giving employment to over two millions of persons. There is not a single operation performed by any one of these millions of workers which does not depend upon the principles explained by one or more of the sciences that belong of right in the curriculum of the modern university ; and there is not a single worker of them who would not be able to do more work and better work from knowing the principles that pertain to his work. The census also estimates that there is invested in the business of farming about ten thousand millions of dollars, giving employment to some six millions of persons, and it is safe to say that the comfort of the laborers, and the amount of their profits would be immensely increased by a knowledge of even the elementary principles of the wide circles of sciences related to agriculture. Of lawyers, there are said to be only about forty thousand, yet it is more than probable that more money has been expended on the professional education of these forty thousand lawyers than upon the professional training of the two million of artisans and six million farmers put together. This, too, notwithstanding the fact that the cost of the education of the lawyer is very much less than that of the artisan or farmer. The one needs only books and teachers ; the other needs not only more books of greater costliness, and more teachers, but, in addition, costly apparatus, extensive and varied laboratories, machinery and museums. Hence, it comes as we have said, that the sustenance that kept alive the old-time college will not suffice for the new."

For full information in regard to the text-books used in the different courses of study, for Experiment Station reports and bulletins, for statements relating to State scholarships, the terms of admission and necessary expenses of students, for a list of the faculty of the Medical Department, for facts in relation to the State Normal School, held annually in the University buildings, and for many additional items of interest, reference is made to the appendix which forms a part of this report.

ATTENDANCE.

It is a gratifying fact that the number of students in attendance during the last session was considerably larger than for the session which immediately preceded it.

The following statements show the distribution of pupils for both sessions into the different courses and schools :

ENUMERATION BY COURSES.

	Collegiate.		Sub-Collegiate		Total.	
	82-83	83-84	82-83	83-84	82-83	83-84
Classical.....	30	21	3	4	33	25
Eclectic.....	8	4			8	4
Latin Science.....	31	35	8	26	39	61
Science.....	60	63	25	41	85	104
Total.....	129	123	36	71	165	194
Deduct (in two courses).....					2	1
Total.....					163	193
Graduate Students.....						4
Total.....						

ENUMERATION BY SCHOOLS.

	82-83	83-84
Agriculture	72	all st'ts
Ancient Languages.....	73	86
Applied Mathematics.....	105	95
Chemistry.....	89	88
History and Philosophy.....	9	15
Pure Mathematics.....	137	161
Modern Languages and English.....	118	173
Natural History.....	56	34

SUMMARY.

	82-83	83-84
Academic Department.....	163	197
At Fisk University.....	15	23
Medical Department.....	131	167
Total.....	309	387

The pupils at Fisk University are colored young men (State appointees), whose tuition fees are paid by the University of Tennessee.

THE REPORTS OF THE TREASURER,

showing the receipts and expenditures of the University and the Experiment Station for the two years ending July 1, 1884, and containing a statement of assets and liabilities, are hereto attached.

IN CONCLUSION,

as representatives of the University of Tennessee—a child of the commonwealth—we venture to offer an expression of trust that you, in your wisdom and parental regard, may determine upon the adoption of such measures as will bring the child up to a full and vigorous manhood—as will make it, more than ever before, a power for good, an ornament, an honor, and a blessing to the State.

Respectfully submitted.

JOHN L. MOSES,
Chairman of Board of Trustees.

December, 1884.

TREASURER'S BIENNIAL REPORT.

KNOXVILLE, TENNESSEE, July 1, 1884.

To the Board of Trustees of the University of Tennessee:

GENTLEMEN:—I have the honor to submit the following statement of the cash receipts and disbursements from July 1, 1882, to July 1, 1884:

RECEIPTS.	1882 to '83.	1883 to '84.	Total.
To balance in Treasury July 1, 1882.....	\$994 79	.....	\$994 79
To receipts from farm.....	800 61	\$987 16	1,787 77
To receipts from diplomas.....	52 00	54 00	106 00
To receipts from laboratory	65 00	80 00	145 00
To receipts from damage account.....	6 20	20 15	26 35
To receipts from contingent fees.....	1,531 30	1,803 20	3,334 50
To receipts from room rent fees.....	565 35	740 85	1,306 20
To receipts from library fees	255 21	299 92	555 13
To receipts from tuition fees.....	457 50	560 00	1,017 50
To receipts from live stock.....	1,348 91	925 38	2,274 29
To receipts from C. M. McGhee.....	2,500 00	.....	2,500 00
To receipts from Scientific Department.....	5 50	.....	5 50
To receipts from library (coupons, city bonds, etc)	1,200 00	1,204 05	2,404 05
To receipts from R. Craighead	400 00	.....	400 00
To receipts from furniture.....	3 60	.....	3 60
To receipts from bills receivable.....	400 00	600 00	1,000 00
To receipts from green-house.....	10 56	3 90	14 46
To receipts, Jan. 1, 1883, interest on Tenn. bonds.	12,105 00	.....	12,105 00
To receipts, July 1, 1883, interest on Tenn. bonds	12,105 00	.....	12,105 00
To receipts from experiment station.....	.....	291 95	291 95
To receipts from labor on grounds returned.....	.....	10 00	10 00
To receipts from Jan. 1, 1884, interest on bonds..	.....	12,105 00	12,105 00
To receipts from July 1, 1884, interest on bonds..	.....	12,105 00	12,105 00
To balance.....	920 94	.....	920 94
Total.....	\$35,727 47	\$31,790 56	\$67,518 03

DISBURSEMENTS.	1882 to '83.	1883 to '84.	Total.
By bills payable.....	\$1,600 00	.....	\$1,600 00
By account for tools and implements.....	214 25	125 00	339 65
By account for furniture.....	54 90	75	55 65
By account for chemical department.....	231 96	277 17	509 13
By account for scientific department.....	7 30	.....	7 30
By account for superintendent grounds.....	600 00	600 00	1,200 00
By account for military department.....	6 65	28 50	35 15
By account for natural history department.....	80	10 05	10 85
By account for stationery and postage.....	192 57	248 44	441 01
By account for interest.....	178 99	307 43	486 42
By account for live stock.....	544 80	375 94	920 74
By account for tuition refunded.....	277 53	20 00	297 53
By account for E. Craighead (salary and loan)...	1,225 00	983 50	2,208 50
By account for green-house.....	86 89	57 50	144 39
By account for fuel.....	209 87	178 97	388 84
By account for expenses.....	483 64	627 82	1,111 46
By account for repairs.....	310 45	895 01	1,205 46
By account for barn building.....	85 17	.....	85 17
By account for farm.....	386 41	3,417 81	6,804 22
By account for cottage building.....	38 24	.....	38 24
By account for fire insurance.....	400 00	.....	400 00
By account for normal school.....	300 00	350 00	650 00
By account for labor on grounds.....	967 78	1,087 37	2,055 13
By account for janitor.....	661 55	628 58	1,290 13
By account for library, city appropriation.....	1,078 03	585 46	1,663 49
By account for room rent refunded.....	1 50	.....	1 50
By account for laboratory.....	5 00	19 30	24 30
By account for experiment station.....	178 75	264 20	442 95
By account for president and professors' salaries.	19,263 35	17,712 45	36,975 80
By account for C. M. McGhee.....	2,500 00	.....	2,500 00
By account for advertising and printing.....	595 49	866 39	1,461 88
By account for office rent.....	40 62	112 50	153 12
By account for Mechanics' National Bank.....	.....	920 94	920 94
By account for diplomas.....	.....	32 55	32 55
By account for mathematical department.....	.....	61 25	61 25
By account for Rev. T. W. Humes.....	.....	614 12	614 12
By account for balance.....	.....	381 56	381 56
Total.....	\$35,727 47	\$31,790 56	\$67,518 03

1884.

ASSETS.

July 1—Balance cash brought down.....	\$ 381 56
City coupons.....	600 00
396 Tennessee State bonds, \$1,000 each.....	396,000 00
Nine 5-per-cent. State bonds, \$1,000 each.....	9,000 00
Twenty Knoxville City bonds, \$1,000 each.....	20,000 00
Real estate valued at.....	130,474 00
Knoxville & Kingston turnpipe stock.....	1,000 00
Bills receivable, balance note for West Tennessee lands.....	60 00
Total.....	\$557,515 56

1884.

LIABILITIES.

July 1—Due Agricultural College.....	\$3,775 00
Due Fisk University.....	580 00
Due Mechanics' National Bank.....	250 17
Due Library fund.....	686 31
Due S. B. Luttrell.....	142 38
Total.....	\$5,433 86

Respectfully submitted,

R. CRAIGHEAD, *Treasurer.*

TREASURER'S REPORT, EXPERIMENT STATION OF UNIVERSITY OF TENNESSEE.

KNOXVILLE, TENNESSEE, June 30, 1884.

Cash receipts and disbursements from October 1, 1883, to
June 30, 1884:

RECEIPTS.

Received from University of Tennessee.....	\$ 210 20
Received from T. G. Cox, Inspector.....	1,137 90
Received from W. D. Tucker, Inspector.....	30 00
Received from Prof. Glenn.....	14 00
Received from Col. Moses White.....	22 00
Received from DeSoto Oil Co.....	15 00
Received from J. W. Wallace.....	17 35
	<u>\$1,446 45</u>

DISBURSEMENTS.

Paid T. G. Cox, Inspector.....	\$181 65
Paid University of Tennessee.....	291 95
Paid Chemical Department.....	636 29
Paid Expense.....	170 57
Paid W. D. Tucker.....	10 00
Balance cash on hand.....	155 99
	<u>\$1,446 45</u>

July 1, 1884, To balance brought down..... 155 99
2 Univ.

Amount collected by Inspectors to July 1, 1883.....	\$1,549 10
Paid to Inspectors' fees by Treasurer.....	\$191 65
Retained by Inspectors (their fees).....	319 31
Expenses of Inspectors, traveling, printing, bottles, etc.....	145 10
Expenses of Inspectors, printing tags.....	100 76
Paid for chemical analyses.....	399 00
Paid for Chemical Department.....	237 29
Balance Cash on hand.....	155 99
	<hr/>
	1,549 10

In accordance with the law establishing this station, the Professor of Agriculture reports the number of tons of fertilizers inspected	3,198 ¹ / ₂
The number of parcels inspected	32,482
The number of determinations on public account	181
The number of samples analyzed on public account.....	39
The number of samples analyzed on private account.....	1

Respectfully submitted,

R. CRAIGHEAD, *Treasurer.*

APPENDIX.

CORPORATION.

CHAIRMAN OF THE BOARD OF TRUSTEES:
HON. JOHN L. MOSES.

SECRETARY AND TREASURER:
ROBERT CRAIGHEAD.

TRUSTEES:

HON. WILLIAM B. BATE, Governor of Tennessee, ex-officio.	
HON. DAVID A. NUNN, Secretary of State, ex-officio.	
HON. THOMAS H. PAINE, Sup't. Pub. Instruction, ex-officio.	
REV. THOMAS W. HUMES, S. T. D.,	JAMES D. COWAN,
HUGH L. MCCLUNG,	C. DEADERICK, M. D.,
WILLIAM K. ECKLE,	JOHN M. BOYD, M. D.,
HON. O. P. TEMPLE,	HON. JOHN L. MOSES,
FRANK A. R. SCOTT,	HON. GEORGE BROWN,
ROBERT H. ARMSTRONG,	A. CALDWELL, Esq.,
HON. JOHN BAXTER,	JOHN M. FLEMING, Esq.,
B. FRAZIER, M. D.,	J. W. GAUT,
WILLIAM RULE,	SAMUEL MCKINNEY,
HON. GEORGE ANDREWS,	WM. MORROW, M. D.,
S. H. SMITH, M. D.,	WM. B. REESE, Esq.,
HON. H. M. POLK,	MOSES WHITE, Esq.,
R. P. EATON, M. D.,	HON. W. C. WHITTHORNE,
H. L. W. MYNATT,	SAMUEL B. LUTTRELL,
CHARLES M. MCGHEE,	ROBERT CRAIGHEAD,
EDWARD J. SANFORD,	JAMES COMFORT, Esq.,
W. A. HENDERSON, Esq.,	J. B. KILLEBREW,
HON. J. M. COULTER,	REV. JAMES PARK, D. D.

BOARD OF VISITORS

APPOINTED BY THE GOVERNOR.

BENJAMIN F. COCKRILL, NASHVILLE.

PEREZ DICKINSON, KNOXVILLE.

T. B. HARWELL, M. D., ASPEN HILL.

J. Y. KEITH, JACKSON.

J. HARVEY MATHES, MEMPHIS.

W. P. MORRIS, CAMDEN.

J. B. STOKELY, NEWPORT.

DORSEY B. THOMAS, BOX STATION.

H. B. YEARWOOD, SWEETWATER.

FACULTY AND OFFICERS.

RODES MASSIE, A.M., D.L.,
Chairman of the Faculty.

HUNTER NICHOLSON, A. M.,
Professor of Natural History and Geology.

EBEN ALEXANDER, B. A.,
Professor of Ancient Languages and Literature.

JAMES DINWIDDIE, M. A.,
Professor of Pure Mathematics.

SAMUEL B. CRAWFORD, M. A.,
Professor of Military Science and Commandant of Cadets.

RODES MASSIE, A.M., D.L.,
Professor of English and Modern Languages.

JOHN W. GLENN, A. M.,
Professor of Agriculture, Horticulture and Botany.

WILLIAM ALBERT NOYES, Ph. D.,
Professor of Chemistry and Mineralogy.

WILLIAM EVERETT MOSES, B. S.,
Adjunct Professor of Chemistry.

SAMUEL B. CRAWFORD, M. A.,
Adjunct Professor of Mathematics.

THOMAS OAKLEY DEADERICK, M. A.,
Adjunct Professor of Ancient Languages.

WILLIAM GIBBS McADOO, M. A.,
Instructor in English and History.

LEWIS CONNER CARTER, B. C. E.,
Instructor in Applied Mathematics.

JOHN NEWTON BOGART, B. S.,
Instructor in Preparatory Department.

WILLIAM ISAAC THOMAS, B. A.,
Instructor in Modern Languages and Natural History.

GUSTAV ROBERT KNABE, Mus. D.,
Instructor in Vocal and Instrumental Music.

HUNTER NICHOLSON, A. M.,
Librarian.

ROBERT JAMES CUMMINGS,
Farm Superintendent.

MISCELLANEOUS INFORMATION.

THE COLLEGIATE YEAR

Begins the first Thursday in September and continues for forty weeks. It is divided into two terms of twenty weeks each.

ADMISSION AND MATRICULATION.

The opening exercises of each year are held in the University chapel, at 9 o'clock A. M., on the first day of the session.

It is of great importance that students enter at the beginning of the collegiate year. Absence, even for a few days, may be a serious hindrance to progress. New classes cannot be formed for the benefit of students entering late.

Applicants for admission must be fourteen years of age; and if coming from other colleges, must produce certificate of their dismissal therefrom in good standing. The Faculty may refuse admission to any applicant, if satisfied that his presence as a student would be injurious to the University.

Students, on arrival, should report themselves to the Commandant, for assignment to rooms, and then to the Chairman of the Faculty, by whom arrangements will be made for their examination. As soon as examined and assigned to classes by the respective Professors, they will present themselves for matriculation to the Registrar.

Payment of term-bills must be made to the Treasurer of the University promptly *at the beginning of each term*. No student is allowed to attend any classes *while his term-bills are unpaid*.

When once admitted, the student remains a student until regularly discharged. Misconduct, even during vacation, may forfeit the right of continuance at the University.

SELECTION OF STUDIES.

The selection and arrangement of studies will be subject to the general control of the Faculty. Except for good reasons, and, in case of students under twenty-one years of age, on the written request of parent or guardian, all students below the grade of third collegiate year will be required to select some one of the systematic courses prescribed. It is, therefore, important that persons sending students to the University should indicate the course of study they are desired to pursue.

Beyond two weeks after matriculation, students will not be allowed to drop or to change any study, except for special reasons approved by the Faculty. Parents and guardians are requested to co-operate with the Faculty in the maintenance of these regulations.

CLASSIFICATION.

All applicants must be well prepared in the subjects required for entrance into the several classes. For admission into an advanced class, the student will be examined in the studies previously pursued by the class, or their equivalent. The faculty may accept equivalents from other institutions only on corresponding and equal courses of study, and upon proper official certificate.

In each school, students will be classed by the Professor according to their attainments in the studies of that school; and the Professor may, at any time, transfer a student to a lower class, to make up deficiencies of preparation or of progress.

All applicants for admission, in every course, are required to give evidence of proficiency in the correct use of the English language; or failing in this, to make good the deficiency, as may be ordered by the Faculty.

ATTENDANCE, DEMERITS, ETC.

Punctual attendance upon all duties is insisted upon as one of the first conditions of progress or of good discipline. Unexcused absences are counted as serious delinquencies. These and other offenses, academic or military, are marked according to a fixed scale. When these demerit marks have reached a certain point, the student receives a warning, of which his parent or guardian is notified. If necessary, the warning is repeated. Then, if a further fixed

point is reached, the student is liable to suspension or dismissal. At any time, however, the Faculty may ask the withdrawal of a student from the University, if satisfied that his continuance in it would be injurious.

REPORTS, EXAMINATIONS, ETC.

The recitations, etc., of each student are marked by a fixed scale. At the end of each quarter term (five weeks) these marks are averaged for each class, and the results, together with the demerit marks, if any, are communicated in a report to the parent or guardian, who is thus advised of the student's progress and conduct. The attention of parents and guardians is asked to these reports, that they may, by encouragement or reproof, co-operate with the Faculty on behalf of their sons or wards.

At the close of each term examinations are held in each class, embracing all the studies of the term. The results, carefully graded according to fixed standards, are combined with the class-standing, to determine the grade of the student, and are communicated in the report at the end of the term.

DEGREES.

The degrees of the University are collegiate, graduate, and professional, for all of which appropriate diplomas are conferred.

COLLEGIATE DEGREES.

Bachelor of Science (B. S.); Bachelor of Arts (B. A.); Bachelor of Philosophy (B. P.); Bachelor of Agriculture (B. Agr.); Bachelor of Civil Engineering (B. C. E.); Bachelor of Mechanical Engineering; Bachelor of Mining Engineering; Bachelor of Applied Chemistry.

COURSES OF STUDY.

The following systematic courses of study are prescribed for these degrees :

Except in a few instances, subjects named between semi-colons constitute, together and in the order given, one hour of daily recitation during the year.

I. AGRICULTURAL COURSE.

(Degree, Bachelor of Agriculture.)

First Year—Algebra, Geometry ; Physics, Chemistry ; Practical Agriculture, Farm Accounts, Botany ; Drawing, free hand, English Praxis.

Second Year—Trigonometry, Surveying and Drawing ; Chemistry ; Drawing, Physiology and Zoology.

Third Year—Physiography, Biology ; English History, English Literature ; Economic Botany, Organic Chemistry, Analytical Chemistry.

Fourth Year—Logic, Mental Philosophy, Political Economy, Constitution of United States, History of Civilization ; Geology, Domestic Animals, Entomology ; Analytical Chemistry, Horticulture and Pomology, Dairy-farming, Truck-farming and Rural Economy.

II. GENERAL SCIENCE COURSE.

(Degree, Bachelor of Science.)

First Year—Algebra, Geometry ; Physics, Chemistry ; Practical Agriculture, English Literature ; English History, English Praxis.

Second Year—Trigonometry, Modern and Analytical Geometry ; Chemistry ; Physiography, Physiology and Zoology.

Third Year—German ; Analytical Geometry or Drawing or Analytical Chemistry, Calculus or Drawing and Surveying or Biology ; Geology, Organic Chemistry, Botany.

Fourth Year—German or French ; Descriptive Geometry or Analytical Chemistry, Drawing and Surveying or Mechanics or Mineralogy ; Logic and Mental Philosophy or Astronomy, Political Economy, Constitution of United States and History of Civilization or Moral Philosophy and Ethics.

III. LATIN SCIENCE COURSE.

(Degree, Bachelor of Philosophy.)

First Year—Algebra, Geometry ; Latin ; Physics, Chemistry ; Practical Agriculture, English Praxis.

Second Year—Trigonometry, Modern and Analytical Geometry or Surveying and Drawing ; Latin ; Chemistry.

Third Year—German or French ; Physiography, Physiology and Zoology ; English History, English Literature ; Analytical Geometry or Analytical Chemistry ; Botany (optional).

Fourth Year—Geology, Biology ; Logic and Mental Philosophy, Political Economy, Constitution of the United States and History of Civilization ; Analytical Chemistry or Descriptive Geometry, Mechanics or Mineralogy or Moral Philosophy and Ethics.

IV. CLASSICAL COURSE.

(Degree, Bachelor of Arts.)

First Year—Latin ; Greek ; Algebra and Geometry ; English Praxis.

Second Year—Latin ; Greek ; English History, English Literature ; Trigonometry.

Third Year—Physics, Chemistry ; French or German ; English Philology, Classical Philology, Modern Greek.

Fourth Year—Logic and Mental Philosophy, Political Economy, Constitution of United States and History of Civilization ; French or German or Astronomy or Chemistry, Moral Philosophy and Ethics ; Physiography, Physiology and Zoology.

V. CIVIL ENGINEERING.

(Degree, Bachelor of Civil Engineering.)

First Year—Algebra and Geometry ; Physics, Chemistry ; Practical Agriculture, English Praxis ; English History, English Literature.

Second Year—Trigonometry, Modern and Analytical Geometry ; Drawing, Surveying and Drawing ; Chemistry.

Third Year—Analytical Geometry, Calculus ; Descriptive Geometry, Mechanics ; Physiography, Physiology and Zoology ; Shades, Shadows and Perspective.

Fourth Year—Engineering ; French or German ; Astronomy or Geology, Mineralogy.

VI. APPLIED CHEMISTRY.

(Degree, Bachelor of Applied Chemistry.)

First Year—Algebra and Geometry ; Physics, Chemistry ; English History, English Literature ; Practical Agriculture, English Praxis.

Second Year—Chemistry ; Physiography, Physiology and Zoology ; Trigonometry, Surveying and Drawing.

Third Year—Analytical Chemistry, Organic Chemistry, Analytical Chemistry ; German ; Descriptive Geometry, Mineralogy.

Fourth Year—Analytical Chemistry ; Metallurgy, Analytical Chemistry ; French or German.

SHORTER COURSES,

For which appropriate certificates are conferred.

I. AGRICULTURE.

First Year—Algebra and Geometry ; Physics, Chemistry ; Practical Agriculture, Botany ; English History, English Literature.

Second Year—Trigonometry, Drawing and Surveying ; Physiography, Physiology and Zoology ; Economic Botany, Horticulture and Pomology, Dairy-farming, Truck-farming and Rural Economy.

II. COURSE OF AGRICULTURAL APPRENTICESHIP.

First Year—Physics, Chemistry ; Practical Agriculture, Farm Accounts, Botany.

Second Year—Physiography, Physiology and Zoology ; Economic Botany, Horticulture and Pomology, Dairy-farming, Truck-farming and Rural Economy.

This course is to be accompanied by work on the farm during the afternoon of each day.

III. TEACHER'S COURSE.

First Year—Algebra and Geometry ; Latin ; English History, English Literature ; Practical Agriculture, English Praxis.

Second Year—Physics, Chemistry ; Physiography, Physiology and Zoology ; French or German ; Theory of Teaching.

Equivalent work in other collegiate classes may be substituted.

PREPARATORY COURSES.

I. SCIENTIFIC COURSE.

Junior Year—Mental Arithmetic, Physical Geography ; Geography and United States History ; Higher Arithmetic ; Lectures in Agriculture.

Senior Year—Latin or General History ; Algebra and Geometry ; English Analysis and Composition ; Lessons in Agriculture.

II. LATIN-SCIENCE COURSE.

Junior Year—Latin (begun) ; Geography and United States History ; Higher Arithmetic ; Lectures in Agriculture.

Senior Year—Latin ; Algebra and Geometry ; English Analysis and Composition.

III. CLASSICAL COURSE.

Junior Year—Latin (begun) ; Geography and United States History ; Higher Arithmetic ; Lectures in Agriculture.

Senior Year—Latin ; Greek (begun) ; Algebra and Geometry.

DEPARTMENT OF MILITARY SCIENCE, TACTICS AND DISCIPLINE.

By the Act of Congress providing for the endowment of Colleges for the benefit of Agriculture and the Mechanic Arts, the instruction in colleges so endowed must include Military Tactics. In order the more effectually to promote this object, the Board of Trustees have adopted for this University a system of military discipline, embodied in a Code of Military Regulations, a copy of which is furnished to each student on matriculation.

The Military Department is, however, only one of the departments of the University, and is secondary to the larger organization of which it forms a part. While, therefore, military discipline will be strictly and impartially administered, it will always be held subordinate to the moral government and higher educational objects of the University.

The students are organized into a battalion of cadets, consisting of four companies, fully officered, armed and equipped, under the command of a Commandant of Cadets and Professor of Military Science. No student will be exempt from military duty, except by order of the Faculty, on recommendation of the Commandant.

Drill and inspection of arms, accoutrements and apparel take place regularly, when the weather permits.

Uniform suits, consisting of a blue, single-breasted blouse, gray pantaloons and cadet cap are worn by all the students, and no deviation from the established uniform will be allowed.

Cadets in their dormitories are under the command of their officers, and the authority of these officers must be respected at all times. The requirements of soldierly discipline and good conduct must always be observed by cadets, whether on or off duty.

Students are graded in this as in the other departments of the University. In military promotion, the military grade, next to general good character, will have full influence. Any cadet or officer, guilty of serious misconduct, will forfeit his place in the line of promotion.

GRADUATE DEGREES.

Master of Arts (M. A.) requires one year of resident graduate study, under the direction of the Faculty. The degree of M. A. in the course has been abolished.

Doctor of Philosophy (Ph. D.) requires two years of resident graduate study, under the direction of the Faculty.

PROFESSIONAL DEGREES.

Civil Engineer (C. E.) requires a two years' course of resident special study, to be prescribed by the Faculty.

Doctor of Medicine (M. D.), and Doctor of Dental Surgery (D. D. S.)

CERTIFICATES.

Certificates are conferred upon students who have completed any special course of study in any school.

SCHOLARSHIPS.

By order of the Board of Trustees, the Faculty are authorized to confer honor scholarships, with exemption from all University fees, upon the student standing first in the regular course of the third year. 1. In the general science course; 2. In the classical course; 3. In the engineering course, or courses; 4. In the course of agriculture or applied chemistry. These scholarships are announced on Commencement Day.

TEACHERS

Holding the certificate of a County Superintendent, or other known and competent person, that they have taught successfully for one school year, and intend to prepare themselves for further teaching, will be admitted without tuition fees, and will be allowed such special facilities as the Faculty may deem advisable.

ASSOCIATED SCHOOLS.

In order to elevate the grade of preparatory school instruction, and to extend the benefits of the University as widely and freely as possible, the faculty are authorized to offer competitive free scholarships to schools preparing students for the University of Tennessee, on the following conditions:

Such schools must be qualified by their course of study, to prepare students for full entrance into the regular collegiate classes of the University.

A competitive written examination must be held at the close of the school-year, covering all required subjects. The first scholar on the general average, as ascertained by this examination, shall be entitled to one year's free tuition in any collegiate course of the University.

This scholarship may be conferred by the principal of the school and must be certified to the chairman of the faculty. The written examination questions, and the answers of the successful student must accompany this certificate, and be approved by the faculty.

The benefits of this scholarship shall not apply to students entering sub-collegiate studies in any department.

BOARD AND LODGING.

Rooms in the University buildings are assigned under the direction of a committee of the faculty, to students who do not reside in Knoxville. No changes can be made without the consent of the committee. Occupants furnish their own rooms, and are held responsible for the damage done them.

Rooms are generally assigned to students on Tuesday and Wednesday, immediately preceding the opening of the session. Those, therefore, who desire to be located in lodgings before college exercises begin, are advised to be on the ground one or two days in advance of the first Thursday of September.

All non-resident students are required to occupy rooms in the University buildings, unless with the consent of the faculty special arrangements be made, by the authority of their parents or guardians, for them to occupy rooms elsewhere. This privilege may, however, be denied, or withdrawn, at the discretion of the faculty.

Students lodging off College Hill are subject to the same regula-

tions as if lodging in University buildings; and such permission will not be granted except upon a distinct acknowledgment of these obligations. Heads of families desiring to board and lodge students are required to make themselves responsible to the faculty for the general observance of these regulations.

Students may board, for meals only, on College Hill at the University Mess Hall, or, with the consent of the faculty, in private families specially authorized for this purpose; but never at any public hotel or restaurant.

EXPENSES

FOR THE TERM OF FIVE MONTHS.

Tuition in all departments (if due).....	\$20 00
Incidental Fee.....	6 00
Room Rent (half-room) in the University buildings.....	3 00
Library.....	1 00

Free tuition is allowed to State appointees, graduates, and scholarship students; also to teachers, and students preparing for the ministry, if properly certified as such. The fee for a diploma, required of graduates in all cases, is \$6.00.

All dues must be paid in advance. Students are not allowed to attend classes until their term bills are paid.

Students not lodging in University buildings are charged one-half the price of room rent for use of study-rooms during the day.

Students in the chemical laboratory are charged \$5.00 per term for cost of material. Special charges are made for damages in the laboratory or library, or elsewhere on the University premises.

Board at the University boarding house may be had at \$2.50 per week, if paid in advance each month; if not, \$2.75. Some students board themselves at less cost. Fuel costs each student in a dormitory about \$5.00 per year, and lighting (including cost of lamp), somewhat less. Washing costs about \$1.50 a month.

Furniture for room, including chair, table, bedstead, mattress and washstand, need not cost more at the manufacturer's than \$7.00 to \$10.00, and may be sold at a fair valuation when the student leaves the institution. Bed clothing will involve a small additional cost, but should, if convenient, be brought from home.

THE ANNUAL COST

of board, fuel, lighting, washing, incidental and room-rent fee, and of a cadet uniform and cap, if board is paid in advance each month, is about one hundred and seventy dollars. If tuition is paid for, forty dollars are to be added. By the labor system, needy students may lighten these expenses somewhat.

TRANSPORTATION.

Since tickets on all the railroads can now be had at three cents a mile, the cost of travel, even from distant portions of the State, is not heavy. Students, however, who shall have paid full fare over the East Tennessee, Virginia and Georgia, or Memphis and Charleston railroads, can purchase return tickets over these roads at two cents a mile.

STATE STUDENTS

are appointed by members of the State Legislature, each Senator having the right to nominate two, and each Representative three, when vacancies exist in their districts or counties. Students thus appointed must be fourteen years of age, and prepared to enter regular classes, collegiate or preparatory, as heretofore prescribed. Once entered, they are entitled to continue until their studies are completed, on the same terms as the other students.

SENATORS AND REPRESENTATIVES

in the State Legislature who have vacancies to fill, are requested to call the attention of their constituents to the educational advantages which the University offers to the youth of the State. They are also requested, as far as practicable, to make their appointments subject to the competitive examination of applicants by the County Superintendents of public schools, as now authorized by law. A copy of the Act of the Legislature is appended to this catalogue. It is very important that the appointments be given to the most capable young men, who have a desire to obtain a thorough collegiate education. Members of the Legislature are especially requested to be full and explicit in their communications to the chairman of the faculty concerning the name, county and post-office of students whom they may appoint.

A list of the vacancies yet unfilled is published in the appendix. As the usefulness of the University is so largely dependent on appointments by members of the Legislature, they are earnestly urged to give attention, that its benefits may be secured as widely as possible to the youth of the State, in their respective counties and districts.

COUNTY SUPERINTENDENTS.

The Board of Trustees, wishing to bring the State University into closer connection with the public school system, have decided that students from each county will be received at the University, free of tuition on the official nomination and recommendation of School Superintendents. They are therefore requested to appoint such young men as will avail themselves of the advantages offered them here. Applicants for admission should have completed the studies in the 8th grade of the public schools.

CABINET AND MUSEUM.

The Cabinet consists at present of working series of minerals, fossils, shells, and rocks; the Museum, of osteological and archæological specimens. They are designed to illustrate the several sciences to which they relate. Additions are constantly being made, and donations are earnestly solicited. Relics of the Indians or Mound Builders, are especially desired. Contributions should be addressed to Prof. Hunter Nicholson, Knoxville, Tenn., and may be sent by express. It is important that the name of the locality from which the specimens are taken, as well as that of the donor, should accompany them.

LIBRARY.

The University Library contains about seven thousand volumes. This number is increasing, both from donations and purchases. The selection of books has been judiciously made, and upon the shelves of the Library will be found the leading standard works on the various topics of human learning. The city of Knoxville made a donation of \$15,000 in its own bonds to the uses of the Library, the interest on which constitutes a valuable means for purchasing new books. In order that this fund may remain unimpaired,

students are charged a small fee to maintain the current expenses of the Library. The Library is accessible at stated hours daily, under suitable regulations, and students may have the counsel of the Librarian or other Professors, as to the right selection and use of books.

LITERARY SOCIETIES.

There are two Literary Societies, of long standing, connected with the University. These Societies are highly prized by the Faculty as well as by the students, and form no unimportant part of the advantages offered by the University. A joint celebration, with an address before the Societies, is appointed for Monday evening preceding Commencement day.

ALUMNI ASSOCIATION.

An Association of Alumni, composed of the graduates of the University and members elected by them, has long been in existence. This Association holds its annual meeting at 3 P. M., on Commencement Day, and its celebration and banquet the same evening. The annual oration is delivered on the Tuesday evening preceding Commencement.

Y. M. C. A.

A Young Men's Christian Association is in active operation in the University, and is exerting a happy influence among the students. A Reading Room, well supplied with periodicals, free to all students, has been opened under its auspices. An Annual Reception is held on the evening of the first Thursday of the academical year.

RELIGIOUS INFLUENCE.

The University is not sectarian, nor under any denominational control; but, as representing a Christian State, it recognizes the obligations of Christian education, and aims to promote religious and moral influences among the students. All students are required to attend daily religious exercises in the University Chapel, and on Sunday to attend divine service in some one of the churches in the city. The community of Knoxville is noted for its Christian character, and for its social refinement.

MUSIC.

Optional instruction is offered in Vocal Music, under a skillful teacher. Sight singing, phrasing and articulation will be the main features, with occasional remarks and lectures on the culture of the of the voice.

In Instrumental Music, instruction is given in connection with the Military Band of the Corps of Cadets. This Band embraces a full range of instruments, and is an important part of the military organization. In addition to the ordinary music required for cadet drills, etc., the Band is instructed in music of a higher grade, and these pieces are performed at the public celebrations of the University and on Commencement Day, etc. The band is in charge of an experienced and skillful Musical Director, who devotes much care to its instruction.

'TRUSTEES AND VISITORS.

The Board of Trustees holds its semi-annual meeting on the last Thursday in January; its annual meeting, on the Tuesday before Commencement Day; and called meetings, for the transaction of special business, at such times as may be appointed. A Committee of the Trustees is appointed to attend the University examinations; and an Executive Committee to visit the University at intervals during the session, and for other purposes.

The Board of Visitors, appointed by the Governor, visit the University at the close of each session, and at such other times as they may appoint.

STATE SUMMER NORMAL SCHOOL.

By endowment of the Peabody education fund, aided by the Trustees of the University of Tennessee, and by the Board of Mayor and Aldermen of the city of Knoxville, a State Normal school, under the authority of the State Superintendent of Public Instruction, is held at the University for four weeks every summer.

In order to continue to the teachers of Tennessee the advantages thus afforded, and to secure to the State University its lawful relation to public education, the Board of Trustees tendered to the State Board of Education, according to the Act of Assembly of March, 1873, the free use of the grounds, buildings and apparatus of the University for the establishment of a permanent Normal

school, to be held under authority of the State during each summer vacation of the University. This tender was accepted in conformity with law, and a State Normal school is held each summer, with power from the State Board of Education, under an act of the Legislature, approved March, 1875, to confer diplomas upon duly qualified teachers, exempting the holders from further examination in any county of the State. This Normal is free to all the teachers, school officers, and persons preparing to teach, in Tennessee. The like privilege may also be extended, on application, to similar persons from other States.

The following are the courses of study :

FIRST YEAR, OR JUNIOR CLASS.

Arithmetic, geography, history, map drawing, elementary methods, pedagogics, reading and elocution, English I., calisthenics, music, drawing, and writing.

SECOND YEAR, OR INTERMEDIATE CLASS.

Elements of algebra, English II., elementary methods continued, pedagogics, reading and elocution, agriculture, geology, calisthenics, music, drawing, and writing.

THIRD YEAR, OR SENIOR CLASS.

Elements of geometry, English III., elementary methods, pedagogics, reading and elocution, agriculture, geology, calisthenics, music, drawing, and writing.

These courses are continuous and progressive. Teachers who pass satisfactorily the examination of the junior class, receive diplomas good for one year ; those who pass the examinations of the junior and intermediate classes, receive diplomas good for two years ; and those who pass the examinations of the junior, intermediate and senior classes, receive diplomas good for life.

All examinations in the Normal school are optional. No teachers will be admitted to the examinations for diplomas in any class who have not attended at least two-thirds of the lessons given to the class.

Besides the regular courses of study, instruction is offered also in many branches of study outside of the curriculum of the common schools, and lectures on special subjects connected with school-work are delivered by prominent educators. More than three hundred persons attended this Normal during the last session in July, 1884.

A STATEMENT,

Showing the quota of appointments to State scholarships in the University of Tennessee allotted by law to each county and Representative or Senatorial District, the number of these appointments that have been filled, and the number still vacant, Dec. 25, 1884 :

COUNTIES.	Quota.	Appointed.	Vacancies.	COUNTIES.	Quota.	Appointed.	Vacancies.
Bedford.....	3	2	1	Roane.....	3	1	2
Benton.....	3	0	3	Robertson.....	3	0	3
Blount.....	3	1	2	Rutherford, 2 Representatives...	6	1	5
Cannon.....	3	0	3	Sevier.....	3	1	2
Carroll.....	3	3	0	Shelby, 5 Representatives.....	15	10	5
Claiborne.....	3	1	2	Smith.....	3	1	2
Cocke.....	3	1	2	Stewart.....	3	0	3
Coffee.....	3	0	3	Sullivan.....	3	1	2
Crockett.....	3	1	2	Summer.....	3	1	2
Davidson, 5 Representatives.....	15	2	13	Tipton.....	3	0	3
Dyer.....	3	1	2	Warren.....	3	0	3
DeKalb.....	3	0	3	Washington.....	3	1	2
Dickson.....	3	0	3	Weakley.....	3	0	3
Fayette.....	3	0	3	White.....	3	0	3
Franklin.....	3	2	1	Williamson.....	3	1	2
Gibson, 2 Representatives.....	6	0	6	Wilson, 2 Representatives.....	6	0	6
Giles, 2 Representatives.....	6	1	5	Campbell and Union.....	3	0	3
Grainger.....	3	1	2	Carter and Johnson.....	3	1	2
Greene.....	3	0	3	Carter, Greene, Johnson, Sul-	3	0	3
Hamilton, 2 Representatives....	6	3	3	livan, Unicoi & Washington			
Hardeman.....	3	2	1	Hamblen, Hancock & Hawkins.	3	1	2
Hardin.....	3	0	3	Knox and London.....	3	2	1
Hawkins.....	3	1	2	Bradley and Polk.....	3	1	2
Haywood.....	3	3	0	James, Meigs and Rhea.....	3	2	1
Henderson.....	3	0	3	Lincoln and Moore.....	3	0	3
Henry.....	3	1	2	Grundy and Marion.....	3	0	3
Hickman.....	3	1	2	Bledsoe, Cumberland, Sequat-	3	2	1
Humphreys.....	3	1	2	chie and Van Buren.....			
Jackson.....	3	0	3	Anderson and Morgan.....	3	0	3
Jefferson.....	3	3	0	Fentress, Pickett and Scott.....	3	0	3
Knox, 2 Representatives.....	6	6	0	Clay and Macon.....	3	0	3
Lauderdale.....	3	1	2	Smith, Summer and Trousdale..	3	0	3
Lincoln.....	3	3	0	Bedford, Marshall & Rutherford	3	0	3
Madison.....	3	1	2	Maury and Williamson.....	3	2	1
Marshall.....	3	0	3	Cheatham, Houston and Mont-	3	2	1
Maury, 2 Representatives.....	6	2	4	gomery.....			
McMinn.....	3	3	0	Lawrence and Wayne.....	3	0	3
McNairy.....	3	0	3	Decatur, Lewis and Perry.....	3	1	2
Montgomery, 2 Representatives.	6	1	5	Dyer, Lake and Obion.....	3	0	3
Monroe.....	3	3	0	Fayette and Hardeman.....	3	3	0
Obion.....	3	0	3	Henry and Weakley.....	3	0	3
Overton.....	3	1	2	Henderson and Madison.....	3	0	3
Putnam.....	3	0	3	Haywood and Tipton.....	3	1	2

SENATORIAL DISTRICTS.

District.	COUNTIES.			
		Quota.	Appointees.	Vacancies.
1	Carter, Johnson, Sullivan, Unicoi, Washington.....	2	1	1
2	Greene, Hancock, Hawkins.....	2	0	2
3	Cocke, Hamblen, Jefferson, Sevier.....	2	1	1
4	Campbell, Claiborne, Grainger, Scott, Union.....	2	1	1
5	Anderson, Knox.....	2	1	1
6	Blount, Loudon, Monroe, Roane.....	2	0	2
7	Bradley, James, McMinn, Meigs, Polk.....	2	1	1
8	Hamilton, Marion.....	2	0	2
9	{ Bledsoe, Cumberland, Grundy, Morgan, Rhea, Sequatchie, Van } Buren, White.....	2	0	2
10	Cannon, DeKalb, Putnam, Warren.....	2	1	1
11	Clay, Fentress, Jackson, Macon, Overton, Pickett.....	2	1	1
12	Robertson, Sumner, Trousdale.....	2	0	2
13	Smith, Wilson.....	2	1	1
14	Coffee, Rutherford.....	2	0	2
15	Bedford, Franklin, Moore.....	2	0	2
16	Marshall, Williamson.....	2	0	2
17	Giles, Lincoln.....	2	2	0
18	Lewis, Maury.....	2	3	1
19	Davidson.....	2	3	1
20	Cheatham, Davidson.....	2	2	0
21	Montgomery, Stewart.....	2	0	2
22	Dickson, Hickman, Houston, Humphreys.....	2	0	2
23	Hardin, Lawrence, Perry, Wayne.....	2	0	2
24	Hardeman, McNairy.....	2	1	1
25	Henderson, Madison.....	2	1	1
26	Benton, Carroll, Decatur.....	2	0	2
27	Henry, Weakley.....	2	0	2
28	Dyer, Lake, Obion.....	2	1	1
29	Gibson.....	2	2	0
30	Crockett, Haywood, Lauderdale.....	2	0	2
31	Fayette, Tipton.....	2	0	2
32	Shelby.....	2	2	0
33	Shelby.....	2	2	0

The Eighteenth and Nineteenth Senatorial Districts have appointed more than their quotas.

RODES MASSIE, *Chairman of Faculty.*

MEDICAL DEPARTMENT, AT NASHVILLE.

FACULTY.

WILLIAM P. JONES, M. D.,
President of the Faculty.

DUNCAN EVE, M. D.,
Dean of the Faculty.

W. K. BOWLING, M. D., LL. D., **DEERING J. ROBERTS, M. D.,**
Professors of Theory and Practice of Medicine and Clinical Medicine.

WILLIAM P. JONES, M. D.,
Professor of Insanity and Medical Hygiene (Emeritus.)

DUNCAN EVE, M. D.,
Professor of Surgery and Clinical Surgery.

J. BUNYAN STEPHENS, M. D.,
Professor of Obstetrics and Clinical Midwifery.

T. B. BUCHANAN, M. D.,
Professor of General, Descriptive and Surgical Anatomy (Emeritus.)

W. D. HAGGARD, M. D., **J. S. CAIN, M. D.,**
Professors of Gynaecology and Diseases of Children.

W. F. GLENN, M. D.,
Professor of Physiology, Genito-Urinary, and Venereal Diseases.

W. G. BIBB, M. D.,
Professor of Physiology, Genito-Urinary and Venereal Diseases.

PAUL F. EVE, M. D.,
Professor of General, Descriptive and Surgical Anatomy.

W. M. VERTREES, M. D.,
Professor of Medical Chemistry and Toxicology.

WILLIAM G. BRIEN, M. D., LL. D.,
Professor of Medical Jurisprudence.

J. G. SINCLAIR, M. D.,
Professor of Diseases of the Eye, Ear and Throat.

ROBERT RUSSELL, M. D., D. D. S.
Professor of Dental Surgery.

W. E. McCAMPBELL, M. D.,
Demonstrator of Anatomy.

DENTAL DEPARTMENT, AT NASHVILLE.

FACULTY.

ROBERT RUSSELL, M. D., D. D. S.,
Professor of Mechanical and Clinical Dentistry.

J. Y. CRAWFORD, D. D. S.,
Professor of Operative Dentistry.

DUNCAN EVE, M. D.,
Professor of Oral Surgery and Clinical Surgery.

W. M. VERTREES, M. D.,
Professor of Chemistry and Metallurgy.

W. G. BIBB, M. D.
Professor of Materia Medica and Therapeutics.

PAUL F. EVE, M. D.,
Professor of General and Special Anatomy.

WM. F. GLENN, M. D.,
Professor of Physiology and Microscopy.

WM. F. FOWLER, D. D. S.,
GEO. B. CLEMENTS, D. D. S.,
Demonstrators of Operative and Mechanical Dentistry.

W. E. McCAMPBELL, M. D.,
Demonstrator of Anatomy.

REPORT
OF THE
EXPERIMENTAL AND OTHER WORK
OF THE
School of Agriculture, Horticulture & Botany
OF THE
UNIVERSITY OF TENNESSEE,
FOR
SESSION OF 1881-'82.

BY JOHN M. MCBRYDE,
LATE PROFESSOR IN THE UNIVERSITY.

WITH ANNOUNCEMENTS
BY JOHN W. GLENN,
PROFESSOR OF AGRICULTURE, HORTICULTURE AND BOTANY.

REV. THOMAS W. HUMES, S. T. D., *President Board Trustees:*

DEAR SIR:—In comppliance with a resolution of the Board of Trustees ordering its publication, I have the honor to submit the following report of the experimental and other work of my school for the session of 1881-'82.

Respectfully,

J. M. McBRYDE,

Professor of Agriculture, Horticulture and Botany.

UNIVERSITY OF TENNESSEE, KNOXVILLE, October 1, 1882.

INTRODUCTORY REMARKS.

The nature and scope of the experimental work of the Agricultural Department of the University of Tennessee have been sufficiently explained in my two preceding Reports. In submitting this one, my third and last, to the farmers of the State, it is therefore only necessary to add a few words by way of explanation and apology. It has been prepared amid the interruptions and discomfords incidental to my removal from the State and establishment in a different field of labor. I am glad to be able to state that the work of this department will be continued and extended by my successor, Prof. J. W. Glenn, for whom I would bespeak the same kind indulgence and consideration, so freely extended to me during the period of my connection with the University. I feel assured the agricultural public of the State will have no reason to regret the change in the management of the Department.

I would again express my obligations to the gentlemen mentioned in last year's Report for their valuable assistance and support.

4—Univ.

EXPERIMENTS IN WHEAT CULTURE.

The experiments of 1880 and 1881 were carefully repeated this year, under as nearly similar conditions as possible, and many new ones were added to the series. The order of arrangement adopted in the two preceding reports will be followed, as far as practicable, in this, and the 156 experiments in wheat culture will be therefore discussed under the same series and sections.

The plats numbered from I to CLI were situated in the same field as those of Series 1st and 2nd of last year.

The shape and relative position of the several plats, are exhibited in the plan on the opposite page.

An alley-way of one foot in width, separating these plats is not shown in this plan. The plats were 1-16 of an acre each.

The land selected was very level and smooth, and the plats were apparently quiet uniform in soil, situation and aspect. Any differences observable were carefully noted.

SERIES I.

To Series I, which includes sections I to VI, also properly belong the new sections XIII and XIV.

The portion of the field in which the plats of this Series were situated was in corn last year. The only manure used on this crop was a handful of compost ($\frac{1}{3}$ plaster, $\frac{1}{3}$ bone meal and $\frac{1}{3}$ river mud) applied to each hill. The corn was cut and removed from the field late in September and early in October, and the land thoroughly prepared for wheat by repeated plowings, harrowings and rollings. For the reasons given in the report of 1880, no fertilizers or manure was used on any of these plats. The soil was in good

heart, a sandy loam, light and friable. For further information concerning it, the reader is referred to the Reports of 1880 and 1881.

SECTION I.

Experiments Testing Different Amounts of Seed per Acre.

The nature and bearing of the experiments of this section are fully explained, and the relative merits of thick and thin seeding sufficiently discussed in the Reports of 1880 and 1881. I will therefore only add, before proceeding to discuss the results of the experiments of the current year, that many farmers seem inclined to hold that the size of the grains of any given variety of wheat is a much more important consideration than the quantity of seed per acre. For example, a late English writer, in referring to this subject, quotes the following experiments, made in Scotland, about twenty-five years ago :

"On No. 1 plot, 400 large kernels were dibbled on No. 2 plot, 400 small seeds of the same wheat, each plot being 36 feet square. No. 1 gave 316 plants and 1,572 grains, which along with the straw and the ear, weighed 106 ounces. No. 2 gave 256 plants and 606 grains, which weighed, along with the straw and the ear, 32 ounces.

"These seeds were bought from a seedsman, and the large were separated from the small by a screen of appropriate size of mesh to separate the big berries from the little. About one-fourth of the whole were extracted by that means, and the three-fourths which did not press through the screen were used as the big kernels for the experiment."*

The plats of this section run from XIII to XXX. It will be observed that in addition to the experiments of last year, testing quantities of seed ranging from 2 pecks to 8 pecks per acre, there are four others testing the effects of 9 pecks and 10 pecks per acre. The two varieties used last season (the Boughton, a bald white, and the Champion Amber, or rather Lancaster Red,† a bearded red wheat) were again employed this year.

All the details of the experiments were made to correspond as nearly as possible with those of the preceding years. The same varieties, mode of preparation, seeding, etc., were made use of.

*Agricultural Review, Nov. 1882. Page 111.

†Report of 1881. Page 116.

Last year the plats of this section were seeded on October 14th, year before last on October 15th, and this year on October 19th, a difference of only a very few days in the time of sowing.

Table I gives in full the conditions and results of the experiments of the present year.

TABLE I.

EXPERIMENTS TESTING QUANTITY OF SEED PER ACRE.

Plats 1-16 acre each. Drilled October 19th. Unfertilized.

No. of Plat.	VARIETY.	Am. of Seed pr acre Pecks.	Yield per Plat.		Yield per Acre.		lb straw &c., to 1 lb. of Grain.
			Straw, &c. Pounds.	Grain. lbs.	Straw, &c. Pounds.	Grain. Bus.	
xiii	Champion Amber...	2	118	82	1,888	21.86	1.44
xiv	Boughton	2	116	69	1,856	18.40	1.68
xv	Boughton	3	100	65	1,600	17.33	1.54
xvi	Champion Amber...	3	75	60	1,200	16.00	1.25
xvii	Champion Amber...	4	79	61	1,264	16.26	1.29
xviii	Boughton	4	96	49	1,536	13.06	1.96
xix	Boughton	5	141	54	2,256	14.40	2.61
xx	Champion Amber...	5	56	54	896	14.40	1.04
xxi	Champion Amber...	6	102	63	1,632	16.80	1.62
xxii	Boughton	6	122	53	1,952	14.13	2.30
xxiii	Boughton	7	116	49	1,856	13.06	2.37
xxiv	Champion Amber...	7	84	61	1,344	16.26	1.37
xxv	Champion Amber...	8	85	55	1,360	14.66	1.54
xxvi	Boughton	8	84	39	1,344	10.40	2.15
xxvii	Boughton	9	105	35	1,680	9.33	3.00
xxviii	Champion Amber...	9	83	67	1,328	17.86	1.24
xxix	Champion Amber...	10	82	58	1,312	15.46	1.41
xxx	Boughton	10	103	52	1,648	13.86	1.98

A very cursory examination of this table will show that the differences observable in the results of the experiments were due in a far greater degree to differences in the condition of the several plats than to the different amounts of seed used. For if we take first the Boughton, we find that 2 pecks of seed gave 18.40 bushels of grain per acre, 3 pecks 17.33 bushels, 5 pecks 14.40 bushels, 6 pecks 14.13 bushels, 10 pecks 13.86 bushels, 4 pecks 13.06 bushels, 7 pecks 13.06 bushels, 8 pecks 10.40 bushels, and 9 pecks 9.33 bushels. It is true that 2 pecks gave the best results, and 9 pecks the worst, and 3 pecks the next best, and 8 pecks the next worst, a decidedly favorable showing for thin seeding; but 10 pecks, on the other hand, gave better results than 4 pecks or 7 pecks, and much better results than 8 pecks or 9 pecks. And between 5 pecks, 6

pecks, 10 pecks, 4 pecks, and 7 pecks, there is practically no difference whatever.

Again, if we examine the crops of straw of this variety, we find that the same thing is the case. For 5 pecks gave the largest yield, 22.56lbs., and 8 pecks the smallest, 13.44lbs., 6 pecks the next largest, 19.52lbs., and 4 pecks, the next smallest, 15.36lbs., 9 pecks, 10 pecks and 3 pecks gave very nearly the same yields.

On comparing the ratios of straw to grain we find that 9 pecks gave the highest proportion, 3.00, and 3 pecks the lowest, 1.54, and that 2 pecks and 10 pecks gave almost the same (1.68 and 1.98).

With the other variety, the Champion Amber (this name is retained, as explained in last year's report for the sake of uniformity), the case is also the same. For 2 pecks gave the best yield of grain, 21.86 bushels, 9 pecks the the next best, 17.86 bushels, 6 pecks, the next, 16.80 bushels, 4 pecks, the next, 16.26 bushels, 7 pecks the same, 3 pecks the next, 16.00 bushels, 10 pecks the next, 15.46 bushels, 8 pecks the next, 14.66 bushels, and 5 pecks the lowest, 14.40 bushels. Between the yields of 6 pecks, 4 pecks, 7 pecks, and 3 pecks, there was again, practically, no difference. The same is true of the straw. For while 2 pecks gave the largest crop, 1,888lbs per acre, 5 pecks gave the smallest, 898lbs, and while 6 pecks gave the next largest, 1,632lbs, 3 pecks gave the next smallest, 1,200lbs. And again, 4 pecks, 7 pecks, 8 pecks, 9 pecks, and 10 pecks gave very nearly the same yields.

Six pecks gave the highest proportion of straw to grain, 1.62, and 5 pecks the lowest, 1.04, 2 pecks and 10 pecks gave exactly the same ratio.

It is safe, therefore, to conclude that the different amounts of seed used produced but little, if any, effect on the crop. The exceptionally large yields of grain of Nos. xiii and xiv, seeded respectively with two pecks of Champion Amber and two pecks of Boughton per acre, were in large part due to the superior fertility of these plats.

This superiority was remarked on and noted down by both the farm superintendent and myself when the plats were seeded. It is generally held that a heavy dose of seed per acre tends to increase the straw at the expense of the grain. The results of these experiments with amounts of seed ranging from two pecks to ten pecks,

taken in connection with those of last year and the year before, would seem to show that this view is not well founded.

For determining the relative values of the two varieties the results are much more conclusive. For, if we compare the yields of the corresponding plats of the two kinds, we find that in all the experiments of the section, except two, the Champion Amber proved decidedly superior to the Boughton. With three pecks per acre the Boughton gave 1.33 bushels more than the Champion Amber, with five pecks it gave exactly the same yield of grain. In this respect, and in this alone, the results of this year's experiments correspond very closely with those of 1880 and 1881. In all other respects they differ most widely, for a reference to those reports will show that the results of the two preceding years were decidedly favorable to thick seeding. Very often there was a corresponding increase in the crop for every additional peck of seed sown. Those of the present year (1882) are, on the other hand, by reason of their negative character, opposed to thick seeding; for they make it plain that the larger amounts of seed used, which added greatly to the expense of the crop, gave no corresponding increase in the yield.

If, however, the results of the experiments of the present year are exceedingly unsatisfactory by reason of their vague and indeterminate character, they are certainly valuable in one important particular. They show and show very clearly the unreliableness of conclusions drawn from the so-called teachings of a single or even a considerable number of experiments. But it may be as well to let the table, which gives the triennial averages of the experiments of this section, speak for itself. I will merely explain that the experiments, with two pecks added last year, and those with nine pecks and ten added this, do not of course appear in this table :

TABLE A.

EXPERIMENTS OF SECTION I FOR 1880, 1881 and 1882.

VARIETY.	Amt of seed per acre P'ks	Straw and Chaff per Acre.				Grain per Acre.			
		1880. lbs.	1881. lbs.	1882. lbs.	Avr'ge lbs.	1880. bus.	1881. bus.	1882. bus.	Aver'ge bushels
Boughton	3	1,880	1,856	1,600	1,778	8.10	17.06	17.33	14.16
Boughton	4	1,784	1,538	1,536	1,618	10.80	13.06	13.06	12.30
Boughton	5	2,192	1,552	2,256	2,000	10.40	15.46	14.40	13.42
Boughton	6	2,880	1,920	1,952	2,250	15.40	20.53	14.13	16.68
Boughton	7	2,400	2,640	1,856	2,298	13.30	25.33	13.06	17.23
Boughton	8	2,496	1,904	1,344	1,914	11.20	20.80	10.40	14.13
Champion Amber	3	2,256	2,272	1,200	1,909	12.40	24.80	16.00	17.73
Champion Amber	4	2,720	1,408	1,264	1,797	14.90	14.40	16.26	15.18
Champion Amber	5	3,216	.928	896	1,680	17.60	15.20	14.40	15.73
Champion Amber	6	3,392	1,776	1,632	2,266	17.60	21.06	16.80	18.48
Champion Amber	7	3,424	2,560	1,344	2,442	19.20	28.00	16.26	21.15
Champion Amber	8	3,680	1,920	1,360	2,320	24.00	25.33	14.66	21.33

Now, if we were only to consider the results of the six experiments with the Champion Amber in 1880, we would certainly decide in favor of thick seeding, for we have a marked increase (with a single exception, explained in the report of that year) in the yield of grain, for every additional peck of seed used. And in 1881 five out of the six experiments with this variety were equally as favorable to thick seeding. And again, both in 1880 and 1881, the three most thickly seeded plats of the Boughton gave the best yields of grain. If we had stopped this series of experiments at the end of the second year, we could have safely affirmed that the results of twenty-four careful experiments continued for two seasons, and these seasons, be it remembered, very dissimilar in character, were clearly in favor of thick seeding. If, on the other hand, we should have regard only to those of the present year, we would see, upon glancing down the column giving the yield of grain for 1882, first, that in the experiments with the Champion Amber the eight peck plat, which in 1880 gave the largest, and in 1881 the next largest yield, this year gave the next smallest, we might say the smallest, for there is practically no difference between its yield and that of the five-peck plat. Second, that in the Boughton the same plat which last year gave the next best, and the year before, the third

best yield, this year gave the worst. Third, that this year the yields of the three heavily seeded plats of the Boughton were inferior to those of the other three; and fourth, that between the three heavily seeded and the three thinly seeded plats of the Champion Amber, there was this year practically no difference. Hence, I say, if this year had been the first of the series we might have concluded that the results of the twelve experiments were in favor, for the reasons above stated, of thin seeding.

The longer I study the subject the more I am convinced that field experiments, as ordinarily conducted, are worse than useless; they are mischievous and misleading. In rash or untrained hands they are dangerous weapons, and even in the most skilled, two-edged swords which cut both ways. Other investigators in this field are reaching the same conclusion. Dr. Sturtevant affirms: "The system of plat experiment as usually understood, *i. e.*, the planting of equal areas under presumably like conditions and then estimating the efficacy of treatment by the crop yielded is not capable of giving an answer which can be deemed trustworthy." His affirmation is based on the results of some field experiments in corn culture. Twenty plats were seeded in corn, ten of these "received ordinary farm cultivation," the other ten no cultivation whatever. The ten cultivated plats gave an average of 48.8 bushels per acre, the ten uncultivated an average of 51.4 bushels. In eight cases out of the ten the yield of the cultivated plats was inferior to that of the uncultivated. The Director goes on to observe:

"Were these our only experiments we might well be justified in assuming that cultivation was a disadvantage to the crop. Fortunately, however, a second series of ten plats alongside received also the same treatment and served as a duplicate series." In this series the ten cultivated plats gave an average of 51.5 bushels per acre, the ten uncultivated an average of 44.1 bushels. "In this case the cultivated was superior to the uncultivated in eight cases out of ten, and in one case no difference. If we look at the average of these two series we find in Series I the uncultivated plats yielding 2.6 bushels per acre more corn than the cultivated; in the second series the cultivated yielding 10.4 bushels per acre more than the uncultivated. Attempt will not be made here to explain these discrepancies."* He concludes: "Before progress in experiment can be

* Bulletin No. XV. New York Agricultural Experiment Station.

made it will be necessary to devise some more accurate and scientific method; one which is not only free from the objection to the plat system, but one which may be capable in itself of giving results which can be acted upon as if trustworthy." Now, while I am hardly prepared to admit that the plat system should be so summarily discarded, I am free to confess that it stands in great need of reformation and improvement. In the first place the experiments should be more carefully conducted. There is need of the greatest care and accuracy in the measurement and preparation of the land, in the selection and weighing and planting of the seed, in the harvesting of the crop, etc. The fact is too often overlooked that the slightest error made in estimating the yield of a small plat becomes a very serious one when multiplied by 10, or 16, or 20. The chemist understands this thoroughly when making his analyses. He will use only balances of the utmost precision; he carefully tests all his reagents, and makes sure that his apparatus is clean and well-adjusted. The agriculturist is only beginning to realize the necessity of similar precautions. Heretofore he has been content to step off his land, to roughly measure his seed, and to make use of scales that show no difference between an ounce and a pound. Again, it is not sufficient to duplicate an experiment. Where tests of fertilizers, of different varieties and quantities of seed, of methods, of culture, etc., are made, four or five plats, situated in different parts of the field should be devoted to each experiment. And again, these tests, thus made, must, to give trustworthy results, be continued for a number of years. For the experiments of any one year serve only to show the effects of a single season, and are valueless as far as any other is concerned. And it should be distinctly remembered that even the results of experiments thus made, and thus continued, are only applicable to the given soil and locality. For different soils and different localities other similar series must be made. General conclusions applicable to a given region can only be drawn from comparisons of the results of experiments made in every different soil and locality of that region. Agricultural experimentation is certainly in its infancy, and it is not capable as yet of giving very accurate results, but this is only the more reason why we should labor to perfect it. It is not more untrustworthy than chemical analysis was a generation ago, and it must be per-

fects by the same means which have given to analysis its accuracy and value, by intelligence, effort and experience.

That well-devised and carefully conducted field tests continued for a period of years, are capable of giving trustworthy results is shown by the celebrated experiments of Lawes and Gilbert. The farmer in making his calculations has to deal for the most part with the doctrine of averages. Especially does he consider the effect of the average seasons in estimating the probable yield of his proposed crops. He makes no special provisions of extraordinary seasons, and yet, no one knows better how potential a factor the season is in determining the yield of any given crop. But he is well aware that such provision would be useless, even dangerous, and that he has to take the chances. He is therefore most concerned to know what processes and methods, what varieties and what amount of any given seed, etc., would give the best results, not in any one year, but in a given period of years. And experiments continued for a number of years and hence exhibiting in their average results the effects of average seasons are fairly capable of giving him the desired information. It is generally held, for example, that on ordinary wheat soils the hardier red varieties are more profitable than the smooth white varieties of wheat. For while the latter will give the larger crop in exceptionally favorable years, the former yield better in poor or average seasons, and experience shows that average results are safer to count on in the long run.

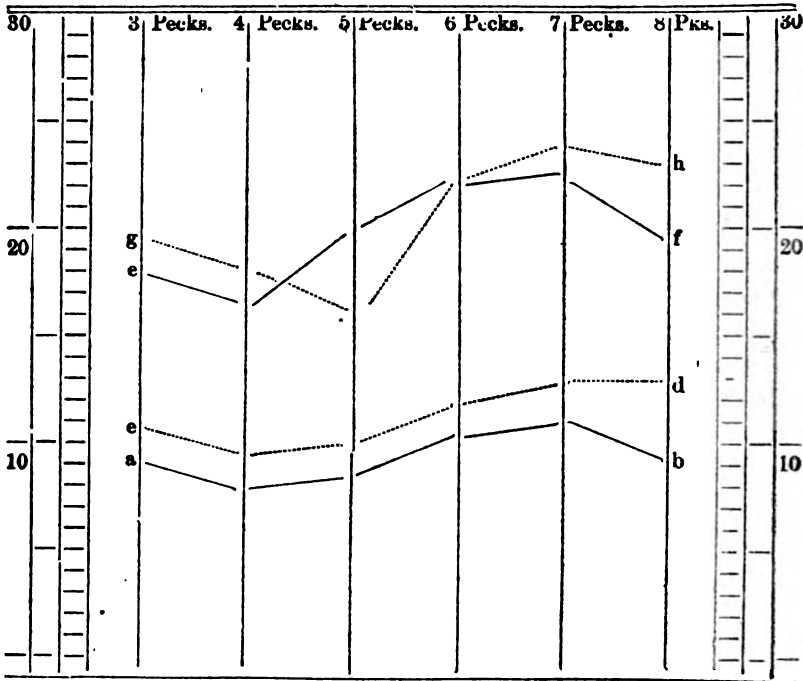
From this point of view the average results of the experiments of section I are possessed of some value. For these experiments now cover a period of three years—years differing greatly in the character of their seasons. Now, while I have commented freely on the conflicting nature of the results of the experiments of the present year, and have pointed out that they are rather favorable than otherwise to thin seeding, I must draw attention to the fact that the difference is too slight to alter the verdict of the experiments of 1880 and 1881. Hence, the averages of the experiments for the three years are, as shown by Table A, still in favor of thick seeding. For in the Boughton plats 7 pecks gave the best average yield, 17.23 bushels per acre, and 6 pecks the next best; 8 pecks and 3 pecks gave nearly the same average, while 4 pecks and 5 pecks were decidedly inferior to the others.

In the Champion Amber, 8 pecks gave the best average, 7 pecks the next best, and 6 pecks the next. With the same amount of seed the average of the Champion Amber was in every case superior to the Boughton.

These points are all well brought out by the following diagram, which explains itself.

TABLE a.

GRAPHIC REPRESENTATION OF AVERAGES OF TABLE A.



Scale 100 pounds to 1-10 inch.

a b represents yield of grain of Boughton.

c d represents yield of grain of Champion Amber.

e f represents yield of straw, etc., of Boughton.

g h represents yield of straw, etc., of Champion Amber.

In this it is seen that the line representing the yield of grain of the Champion Amber keeps well above, and fairly parallel with, that representing the grain of the Boughton until the 7 peck vertical line is passed, when the latter suddenly falls; that both are

higher at 3 pecks than at 4 pecks or 5 pecks, &c., &c. The distance between the two lines representing the yields of grain and straw of each variety shows the ratio of straw to grain for the different amounts of seed used.

SECTION II.

Experiments Testing Time of Sowing.

The comparative advantages of early and late seeding are fully discussed in the Reports of 1880 and 1881. In order to avoid unnecessary repetition I shall therefore, merely refer the reader to those Reports for further information on this subject, and proceed to discuss the experiments of this year.

The plats of this Section run from I to XII, as shown on the preceding plan. The two kinds of wheat heretofore employed, and described in former reports, were sown on dates corresponding as nearly to those of last year and the year before as the differences in the seasons would permit. Two plats, one of Boughton and one of Champion Amber, were sown on September 20th, two on September 30th, two on October 10th, two on October 20th, two on November 1st and two on November 12th. It will be seen that the sowings were made at intervals of about ten days, and that they extended over a period of nearly two months.

Table II gives the details and results of the experiments in full.

TABLE II.

EXPERIMENTS TESTING TIME OF SEEDING.

Plats 1-16 Acre each. Unfertilized. 4 Pecks per Acre. Drilled.

No. of Plat.	VARIETY.	Time of Seeding.	Yield per Plat.		Yield per Acre.		lb. straw &c., to 1 lb. of Grain.
			Straw, &c. Pounds.	Grain lbs.	Straw, &c. Pounds.	Grain. Bus.	
i	Boughton.....	Sep. 20.	84	31	1,344	8.26	2.71
ii	Champion Amber...	Sep. 20.	154	71	2,464	18.93	2.17
iii	Champion Amber...	Sep. 30.	120	80	1,920	21.33	1.50
iv	Boughton.....	Sep. 30.	93	42	1,488	11.20	2.21
v	Boughton.....	Oct. 10.	141	74	2,256	19.73	1.90
vi	Champion Amber...	Oct. 10.	196	94	3,136	25.06	2.08
vii	Champion Amber...	Oct. 20.	122	88	1,952	23.46	1.27
viii	Boughton.....	Oct. 20.	108	59	1,728	15.73	1.83
ix	Champion Amber...	Nov. 1.	114	61	1,824	16.26	1.87
x	Boughton.....	Nov. 1.	105	30	1,680	8.00	3.50
xi	Champion Amber...	Nov. 12.	102	63	1,632	16.80	1.62
xii	Boughton.....	Nov. 12.	100	32	1,600	8.53	3.12

In examining first, the Boughton plats, we find that the sowing of October 10th gave the best yield of grain, 19.73 bushels per acre, the sowing of October 20th the next best, 15.73 bushels, the sowing of September 30th the next, 11.20 bushels, the sowing of November 12th the next, 8.53 bushels, the sowing of September 20th the next 8.26 bushels, and the sowing of November 1st the worst 8.00 bushels. The two sowings made about the middle of October gave by far the best results. The three worst plats, the one seeded September 20th (the earliest of all) and the two seeded in November, gave almost the same yields of grain. The sowing of October 10th gave more than double as much grain as any of the three.

If we examine the crops of straw of the Boughton plats we find that the October sowings gave the largest yields, the November sowings the next largest, and the September sowings the smallest.

The ratios of straw to grain were highest in the November sowings, the next highest in the September, and lowest in the October.

No. I. seeded September 20th was seriously injured by the rust; No. IV. seeded September 30th was attacked but not seriously damaged by it.

When we turn to the results of the Champion Amber experiments we find a remarkably close agreement with those of the Boughton. For, here again, the sowing of Oct. 10th gave the largest yield of grain, 25.06 bushels per acre, the sowing of Oct. 20th the next largest, 23.46 bushels, and the sowing of September 30th the next, 21.33 bushels. The sowing of September 20th gave the next largest yield, 18.93 bushels, the sowing of November 12th the next largest, 16.80 bushels (these two sowings are transposed in the Boughton) and the sowing of November 1st again gave the smallest, 16.26 bushels. The earliest sowing and the two latest here again gave the worst results, not materially different, the one from the others, and far inferior to those of the sowing of October 10th, which gave the best.

As far as the straw of this variety is concerned we find that the sowing of October 10th gave the largest yield, that of September 20th the next largest, and the November sowings the smallest.

The sowing of September 20th shows the highest ratio of straw to grain, the sowing of October 20th the lowest.

The early sown plats of this variety were not affected by the rust.

If we compare the two varieties we find that every plat of the Champion Amber gave from 7 bushels to 10 bushels per acre more than the corresponding plat of the Boughton. The results of the experiments for this year seem to show that about the middle of October is the best time for sowing both varieties, that early sowing suits the red variety better than late, that the Boughton sown in September is liable to rust, and that the latter variety will give about the same yield sown late as it will sown early; also that the Boughton gives less straw when sown early; the Champion Amber, when sown late.

These results correspond in the main with those of the experiments of last year.

In comparing the experiments of the three years, it is necessary to group together (as was done in last year's Report) the earliest sowing of each year, then the next, and so on. It will be seen that in the earliest sowing in each year there is a difference of from four to seven days; in the next earliest, a difference of from four to eight days; in the next, a difference of from one to five days; in the next, one of from three to six days; in the next, one of from one to three days; and in the latest, one of only two days. These differences in the time of sowing were unavoidable, in consequence of the dissimilar character of the three seasons.

In Table B the results of the experiments of 1880, 1881 and 1882 are compared:

TABLE B.

EXPERIMENTS OF SECTION II. FOR 1880, 1881 AND 1882.

VARIETY.	Time of Seeding.	Straw and chaff per acre.				Grain per acre.			
		1880. lbs.	1881. lbs.	1882. lbs.	avrg lbs.	1880. bus.	1881. bus.	1882. bus.	avrg bus.
Boughton	Sept. 17	1,456	1,520	1,344	1,440	6.10	11.20	8.26	8.52
"	" 24								
"	" 20	1,632	2,144	1,488	1,754	6.60	12.26	11.20	10.02
Boughton	Sept. 16								
"	Oct. 4	2,980	1,586	2,256	2,250	9.60	13.06	19.73	14.13
Boughton	Sept. 30								
"	Oct. 9	2,416	2,272	1,728	2,138	9.00	23.46	15.73	16.06
Boughton	" 14								
"	" 10	2,256	2,112	1,680	2,019	9.30	18.13	8.00	11.81
Boughton	Oct. 23								
"	" 26	2,112	1,728	1,600	1,813	10.40	12.53	8.53	10.48
Boughton	" 20								
"	Nov. 3	1,696	2,000	2,464	2,053	11.70	16.00	18.93	15.54
Boughton	" 2								
"	" 1	1,568	1,504	1,920	1,697	11.20	14.93	21.33	15.82
Boughton	Nov. 14								
"	" 12	1,968	1,408	3,136	2,170	14.90	14.40	25.06	18.12
Boughton	" 12								
Champion Amber...	Sept. 17	1,568	1,504	1,920	1,697	11.20	14.93	21.33	15.82
"	" 24								
Champion Amber...	Sept. 26	1,968	1,408	3,136	2,170	14.90	14.40	25.06	18.12
"	Oct. 4								
Champion Amber...	Sept. 30	1,840	1,872	1,952	1,888	15.70	19.46	23.46	19.54
"	Oct. 9								
Champion Amber...	" 14	1,920	1,040	1,824	1,594	14.40	13.33	16.28	14.66
"	" 10								
Champion Amber...	Oct. 23	1,536	1,104	1,632	1,424	14.40	12.26	16.80	14.48
"	" 26								
Champion Amber...	" 20	1,920	1,040	1,824	1,594	14.40	13.33	16.28	14.66
"	Nov. 3								
Champion Amber...	" 1	1,536	1,104	1,632	1,424	14.40	12.26	16.80	14.48
"	" 1								
Champion Amber...	Nov. 14	1,536	1,104	1,632	1,424	14.40	12.26	16.80	14.48
"	" 12								
Champion Amber...	" 12								

In the Boughton, the sowing of October 23-26-20 gave the best average results, and the sowing of October 9-10-14 the next best. The two November sowings gave the next best results and the two September sowings the worst. Between the averages of the two September sowings there is only a slight difference. The same is true of the two October and also of the two November sowings the averages of the straw correspond very closely with those of the grain.

In the Champion Amber, the sowing of October 23-26-20 also gave the best average results, and the sowing of October 9-10-14

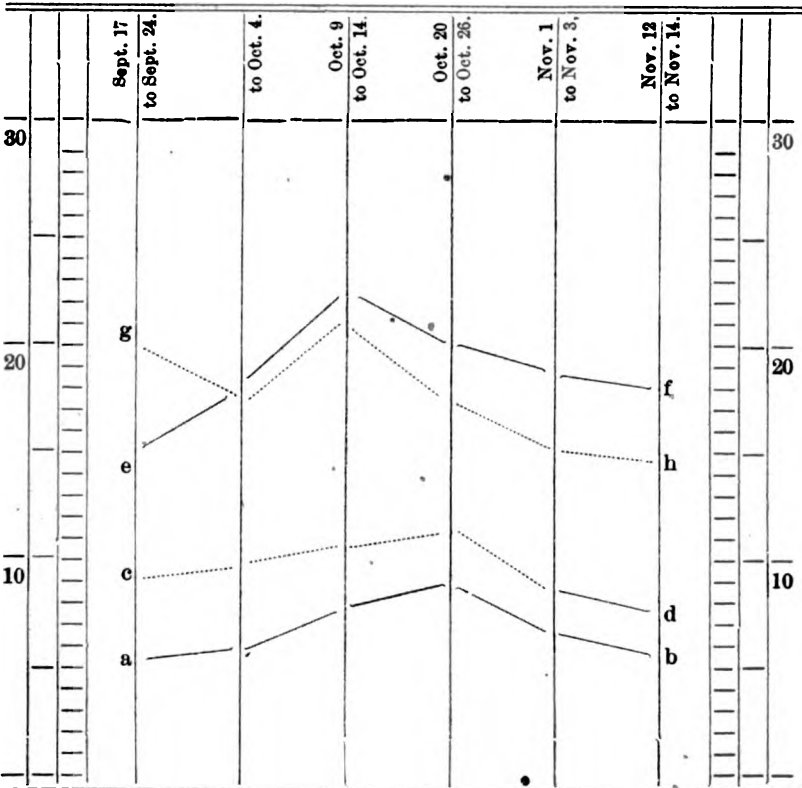
the next best; but the September sowings gave better results than the November ones. And, here again, the difference between the average yields of the two October sowings was slight. Between the averages of the two September sowings there was practically no difference. And the same thing is not only true of the triennial averages of the two November sowings, but also of the results of these sowings for each separate year.

In this variety the crops of straw did not correspond with those of the grain.

In the experiments of the three years, especially in those with the Champion Amber, there is, unlike those of the preceding section, a close correspondence in the results obtained. The following diagram brings out very clearly not only the points mentioned, but also many others:

TABLE b.

GRAPHIC REPRESENTATIONS OF AVERAGES OF TABLE B.



Scale and letters as in Table a.

5—Univ.

It shows that in the Boughton the September sowings gave the smallest yields of grain, the October sowings the largest, and the November sowings the next largest; that in the Champion Amber the September sowings gave the next largest, the October sowings the largest and the November sowings the smallest; that the Champion Amber gave the best yield of grain throughout, and that the two varieties approached each other most nearly, as far as yield of grain was concerned, in the later seedings, in other words, that late seeding suited the Boughton, and early the Champion Amber.

It shows again, that the maximum straw production was reached on October 9-14, and that after the first sowing the Boughton gave more straw than the Champion Amber. It brings out very clearly the great difference between the ratios of straw to grain in the two varieties.

The average results of the experiments for the three years still support, in the main, the conclusions reached last year. These conclusions were as follows: "It would appear that in this region the best time for sowing both varieties is from the middle to the end of October; that a bearded red variety (Champion Amber) can be sown early or late with equal advantage, as far as yield of grain is concerned, but that late sowing decreases its produce of straw; that late sowing suits the Boughton (a bald white kind) better than early; and that the wheat crop can be put in any time between the middle of September and the middle of November, with a fair prospect of profitable returns."

The only changes necessary to be made in this statement are the following:

1st. The best time for sowing the two varieties is about the middle (not from the middle to the end) of October; and 2nd, early seeding suits the Champion Amber rather better than (not as well as) late.

Experienced farmers throughout the Piedmont region of the South have long held that about October 20th is the very best time for sowing wheat.

SECTION III.

Experiments Testing Varieties.

The question of the best varieties of wheat is one of surpassing importance, not only to the farmer, but to the miller as well. Mr.

W. P. McLaren, a prominent member of the Milwaukee Chamber of Commerce, in a letter discussing the, then new, process of making "patent" flour, remarked several years ago: "The only question in respect to our favorable competition with the world in the highest grade of flours, is the supply of suitable wheat."* He goes on to say that the hard wheats are the only ones that will make the new process flour, and that in his opinion the "Fife" stands at the head of these wheats.

This question is at last beginning to receive the attention it deserves. Careful efforts are now making to unite the best qualities of favorite varieties by judicious cross-breeding, to secure productiveness by the careful selection of the seeds of the most fruitful plants, to introduce new varieties of established merit in other countries, and to improve our leading kinds by a systematic change of seed. But these efforts are as yet feeble and ill-directed, and much remains to be done in this important field of research. Speaking of the practice of changing the seed, a British writer, while freely admitting its advantages, observes:

"It is, however, proper to observe that this practice of changing the seed is founded more upon mere opinion than upon well-ascertained facts, and that in those instances where it has been followed by beneficial results, nothing is known of the causes to which such success is due. It is much to be desired that our agricultural societies should address themselves to the thorough investigation of a question of such vital importance." He pertinently adds, that in the selection of a variety the farmer will do well to look to productiveness rather than to superior quality. "For, however, it may gratify his ambition to show the heaviest and the prettiest sample in the market, and to obtain the highest price of the day, no excellence of quality can compensate for a deficiency of even a few bushels per acre in the yield."†

In making his selection, the farmer has certainly a sufficient number of varieties to choose from. Hundreds of new kinds are yearly put upon the market. Too many of these are only old wheats under new names. Among the new varieties most extensively advertised, the Black-bearded Centennial, the Hard Australian, and the Hiege Prolific, are, perhaps, the most prominent.

* Transactions of the Wisconsin State Agricultural Society, 1875-76; Page 339.

† Encyclopedia Britannica; Chas. Scribner's Sons. Vol. I. Page 354.

I am not prepared, as yet, to advise the farmers of the State as to the kinds best suited to this section. It is well-known, as remarked in a preceding Report, that certain sections and soils require certain varieties, and that the adaptation must be determined by observation and experiment. A variety which has proved utterly worthless in one region may, when removed to another, give the most satisfactory results. Still, there are a few facts generally admitted in regard to certain varieties which it may be as well to remember.

It is now held that the red wheats (especially the bearded ones) are usually more hardy than the white. The writer referred to above, remarks :

"As red wheats usually sell at from 2s. to 4s. less per quarter than the white wheats of similar quality, they are less grown than heretofore. But being more hardy and less liable to mildew and sprouting than the finer white wheats, a recurrence of unfavorable seasons always leads to an increased cultivation of them. Some of these red wheats are, however, so productive that they are preferred in the best cultivated districts of England." Klippart is authority for the statement that there is one exception to the general rule of the greater hardiness of the bearded varieties. As the beards greatly increase the surface of the heads, and as the amount of heat radiated is proportional to the surface, "hence, bearded wheats have more dew than bald or smooth ones, and as frost is nothing more nor less than frozen dew, it follows, as a matter of course, that bearded wheats, when in head, suffer from frost more than smooth ones. The frost of June 4, 1859, fully demonstrates this fact, if any proof were necessary. The Mediterranean everywhere suffered more from the frosts than did the white blue-stem."* Such late frosts are, however, very unusual, and are generally too slight to do any damage. The wheat above mentioned, the Red Mediterranean, has, perhaps, the best record of any variety cultivated in this country. In last year's Report I gave its history, and explained that the Lancaster Red was either the same wheat or an improved sub-variety of it. I also stated that the wheat grown for some years at the College Farm, under the name of the Champion Amber, was undoubtedly the same wheat (the true Champion

*Ohio Agricultural Report, 1859. Page 319.

Amber being a bald kind, with a much smaller berry).* As explained a few pages back, I have thought it better, for the sake of uniformity and clearness, to continue to call it the Champion Amber, but it must be remembered that it is really the Mediterranean. The quality of this wheat is too generally underestimated. It is undoubtedly one of the best milling kinds we have. Prof. Townshend, in discussing the quality of Ohio wheats, remarks of this variety: "The best wheat for bread grown in Ohio, so far as my knowledge goes, is the old Red Mediterranean."† He mentions another fact in regard to it which is confirmed by the experiments of the preceding section: "Judge Runkle, of West Liberty, in this State, counted the kernels in a given measure of several varieties of wheat, and found that the Mediterranean had the largest kernel. This, with the fact before stated, that perhaps it did not tiller as well as some varieties, led him to the inference that in sowing this variety more seed was required. I afterwards sowed two or three pecks more of Mediterranean to the acre than before, and found more than an equivalent in the increase of the crop."‡

Besides the varieties experimented with in 1880 and 1881, descriptions of which are given in my two former Reports, one other kind, sent out by the U. S. Department of Agriculture, was grown this year. This variety, called the Rice wheat, is thus described by the Department: "A smooth, light-red or amber variety, from Frederick County, Maryland. It is a vigorous grower, hardy, ripens early, and is in demand in the neighborhood where it is known." A package of the Dallas wheat was also received from the Department and sown on a plat adjoining the one on which the Bill Dallas (the same wheat, the seed of which came from Georgia several years ago) was seeded. The conditions and results of the experiments are given in Table III:

* Report of 1881. Page 117.

† Ohio Agricultural Report, 1879. Page 436.

‡ Ibid.

TABLE III.

EXPERIMENTS TESTING VARIETIES.

Plats 1-16 acre each. Drilled Oct. 20th and 21st. 4 pecks per acre. Unfertilized

No. of Plat.	VARIETY.	When Cut.	Yield per Plat.		Yield per Acre.		lbs. straw to 1 lb. of Grain.
			Straw etc., lbs.	Grain. Pounds.	Straw, etc., lbs.	Grain. Bushels.	
xxxi	Rice	June 9.	153	57	2,448	15.20	2.68
xxxii	Dallas (U. S. } Dept. Agri.) }	" 10.	66	49	1,056	13.06	1.35
xxxiii	Bill Dallas.....	" "	86	54	1,376	14.40	1.59
xxxiv	Champion Am- ber (U. S. } Dept. Agri.) }	" "	64	36	1,024	9.60	1.78
xxxv	Fultz	" 9.	95	55	1,520	14.66	1.72
xxxvi	Key's Prolific..	" "	54	46	864	12.27	1.17
xxxvii	Vienna No. 1....	" 7.	83	47	1,328	12.53	1.76
xxxviii	Walker	" 10.	85	55	1,360	14.66	1.55
xxxix	Midge Proof.....	" "	82	43	1,312	11.46	1.91
xl	Gold Dust.....	" "	60	45	960	12.00	1.33
xli	Yellow Missouri.	" "	85	40	1,360	10.66	2.12
xlii	Ohio Swamp.....	" "	93	52	1,488	13.86	1.79
xliii	Silver Chaff.....	" "	39	26	624	6.93	1.50
xliv	White Bearded...	" 9.	47	28	752	7.46	1.69
xlvi	Sanford.....	" "	47	33	752	8.80	1.42
xlvii	White Fultz.....	" "	41	38	656	10.13	1.08
xlviii	Boughton	" "	96	49	1,536	13.06	1.96
xlvii	Champ'n Amber	" "	79	61	1,264	16.26	1.29
lxiii	Scott*.....	" 12.	49	36	784	9.60	1.36

* Sown October 25th.

The column giving the day on which each variety was cut shows that the different kinds ripened very nearly at the same time. It will be noticed that there is another wheat, the Scott, not mentioned in last year's Report. This is a smooth, white sort, the seed of which came from Southwest Virginia. It was sown fall before last on the farm, but on a piece of land remote from the other plats, hence its yield was not given in last year's Report. Owing to a change in the weather, it was sown last fall five days later than the other varieties.

The Champion Amber (or Mediterranean) gave the best yield of grain, 16.26 bushels per acre. Its crop of straw was however quite light. The Rice wheat gave the next best crop of grain and by far the largest crop of straw. The Fultz and the Walker come next, with the same yield of grain, 14.66 bushels, the Bill Dallas next (14.40 bushels), the Ohio Swamp next (13.86 bushels), the Dal-

las from the U. S. Department of Agriculture, and the Boughton next (13.06 bushels), Vienna No. 1 next (12.53 bushels), Key's Prolific next (12.27 bushels), Gold Dust next (12.00 bushels), Midge Proof next (11.46 bushels), Yellow Missouri next (10.66 bushels), White Fultz next (10.13 bushels), Scott and Champion Amber from the U. S. Department of Agriculture next (9.60 bushels), Sanford next (8.80 bushels), White Bearded next (7.46 bushels), and Silver Chaff last (6.93 bushels). The last named variety gave also the smallest crop of straw. The Rice wheat shows the highest ratio of straw to grain, the White Fultz the lowest. Of the two Dallas plats the one seeded with the home grown grain gave somewhat the better yield. Between the yield of grain of the worst plat, and that of the best there is a difference of upwards of 2.34 per cent. Between some of the varieties the differences are very slight. But it should be remembered that great allowance must be made for differences in the plats themselves. In experiments with varieties it is necessary above all things to continue the tests for a number of years. Hence, without dwelling longer upon those of the present year, it will be better to compare their results with those of the similar experiments of 1880 and 1881. These are all set forth in Table C.

TABLE C.

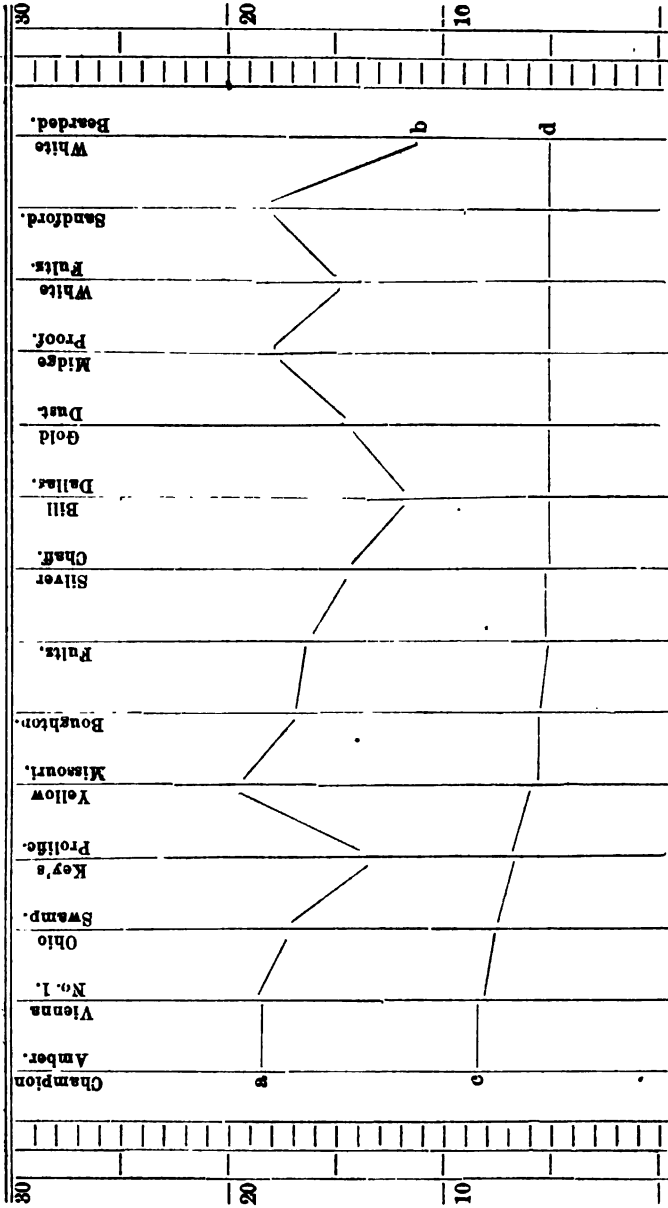
EXPERIMENTS OF SECTION III FOR 1880, 1881 AND 1882.

VARIETY	Straw and Chaff per Acre.				Grain per Acre.			
	1880. lbs.	1881. lbs.	1882. lbs.	Av'ge. lbs.	1880. Bus.	1881. Bus.	1882. Bus.	Av'ge. Bus.
Champion Amber.....	2,224	2,096	1,264	1,861	14.90	16.26	16.26	15.80
Vienna No. 1.....	2,448	1,712	1,328	1,829	10.40	18.13	12.53	13.68
Ohio Swamp.....	2,016	1,344	1,488	1,616	9.60	16.26	13.86	13.24
Key's Prolific.....	1,776	1,168	864	1,269	11.70	12.53	12.27	12.16
Yellow Missouri.....	1,936	2,560	1,360	1,952	5.00	20.00	10.66	11.88
Boughton.....	2,960	592	1,536	1,696	9.60	11.73	13.06	11.46
Fultz.....	2,320	944	1,520	1,594	3.40	14.93	14.66	10.99
Silver Chaff.....	2,656	1,072	624	1,450	12.80	12.80	6.93	10.84
Bill Dallas.....	1,504	880	1,376	1,253	6.10	12.00	14.40	10.83
Gold Dust.....	2,064	1,408	960	1,477	5.30	13.86	12.00	10.38
Midge Proof.....	2,768	1,488	1,312	1,856	6.60	12.53	11.46	10.19
White Fultz.....	2,606	1,232	656	1,498	8.80	11.46	10.13	10.13
Sanford.....	2,032	2,848	752	1,877	6.90	12.53	8.80	9.41
White Bearded.....	1,936	752	752	1,146	5.00	14.13	7.46	8.86

The varieties are arranged according to their average yields of grain. It is seen that the Champion Amber gave decidedly the best average yield of grain and very nearly the best average crop of straw. In 1880 and 1882 it gave the best and in 1881 the third best yield of grain of any of the varieties named in the table. The Vienna No. 1, a smooth White Wheat, shows the second best average yield of grain. In 1880 it was fourth best, in 1881 second best, in 1882 sixth best. Last year the quality of its grain was poor, this year it was excellent. The Ohio Swamp, a bearded red variety, gave the third best average of grain, but little lower than that of the Vienna. In 1880 this variety stood fifth (along with the Boughton), in 1881 it stood third (along with the Champion Amber), and in 1882 fourth best. The Key's Prolific, another bearded red sort, gave the fourth best average. In 1880 it was third best, in 1881 ninth best, and in 1882 seventh best. It will be noticed that it gave very nearly the same yield each year. The Yellow Missouri, a bald white kind, gave the fifth best average. Last year this variety gave the best yield of grain, but this year and year before last it gave almost the worst. The Boughton, a bald white wheat, gave the sixth best average. Like the Key's Prolific, it gave fair crops each year. The Fultz, a smooth amber variety, gave the seventh best average. In 1881 and 1882 its crops of grain were excellent and among the very best, and its general average was only kept down by the poor crop of 1880. The Silver Chaff, the eighth best, proved almost a failure this year. In 1880 and 1881 it gave good crops. The Dallas Wheat, the ninth best, gave an excellent yield this year, but a very poor one in 1880. But its crop of that year was badly damaged by the rust. This variety is becoming popular at the north, where it is generally esteemed to be rust proof. It is also claimed for it that its kernels shrink but very little in drying. There is but little difference in the triennial averages of the five remaining varieties. In fact the eight lowest kinds gave very nearly the same yield of grain.

The diagram of these averages given in Table C. shows very clearly the slight difference in the yields of the varieties between the Fultz and the White Fultz.

TABLE c.
GRAPHIC REPRESENTATIONS OF AVERAGES OF TABLE C.



Scale in Table c—*a* represents yield of grain. *b* represents straw, etc.

It also shows that the Yellow Missouri gave the best average crop of straw, the Sandford the second best, the Champion Amber the third best, and the Midge Proof the fourth best, and the White Bearded the worst. It also brings out the varying ratios of straw to grain. In the Yellow Missouri this ratio was the highest, in the Key's Prolific, the lowest. It appears from these tests, covering a period of three years, that of the fourteen varieties of wheat experimented with, the Champion Amber, Vienna No. 1, Ohio Swamp and Key's Prolific gave the best average results, and that of these the first, third and fourth, in other words three out of the four, were bearded red wheats. This fact is significant and merits special attention. And, moreover, it accords with the testimony cited above as to the superior hardiness and general reliability of the red wheats.

SECTION IV.

Experiments Testing Mode of Seeding.

In the two preceding Reports the comparative merits of the different methods of sowing wheat are fully discussed. In the Report of 1880 mention is made of the fact that the U. S. Department of Agriculture had taken the trouble to collect and publish statistics bearing on the comparative advantages of broadcasting and drilling. Nine-tenths of the replies received in answer to its inquiries (replies representing 453 counties and 25 States) were in favor of drilling winter wheat.* The writer in the Encyclopædia Britannica already quoted, states, on the other hand, that in Scotland, "often repeated trials have shown that larger crops are obtained by broadcasting than by drilling." It would be easy, were it necessary, to quote other statements showing that the question is still an open one.

The experiments of last year were repeated without change this season. The results and details are given in full in the following table :

* Department of Agriculture, Report of 1874. Page 60.

TABLE IV.

EXPERIMENTS TESTING MODES OF SEEDING.

Plats 1-16 acre each. Seeded October 19th and 20th. Unfertilized.

No. of Plat.	VARIETY.	How Seeded.	Am't Seed per Acre. pks.	Yield per Plat.		Yield per Acre.		Lbs. Straw &c., to 1 lb. of Grain.
				Straw, &c. lbs.	Grain. lbs.	Straw, &c. Lbs.	Grain, Bus.	
liii	Champ'n Amber..	Broadcast	4	45	40	720	10.66	1.12
liv	Boughton.....	Broadcast	4	73	52	1,168	13.86	1.40
lv	Boughton.....	Broadcast	6	86	44	1,376	11.73	1.95
lvi	Champ'n Amber..	Broadcast	6	64	46	1,024	12.26	1.39
xvii	Champ'n Amber..	Drilled	4	79	61	1,264	16.26	1.29
xviii	Boughton.....	Drilled	4	96	49	1,536	13.06	1.96
xxi	Champ'n Amber..	Drilled	6	102	63	1,632	16.80	1.62
xxii	Boughton.....	Drilled	6	122	53	1,952	14.13	2.30
xlvi	Boughton.....	Dibbled*	1	85	30	1,360	8.00	2.83
xlvi	Champ'n Amber..	Dibbled*	1	50	30	800	8.00	1.66

* Hoed March 22d.

The results were again inclusive, as far as one variety is concerned. In the Boughton four pecks broadcast gave slightly better results than the same amount drilled, the first yielding 13.86 bushels per acre, the second 13.06 bushels. Six pecks of this variety, drilled in, gave, however, much better results than the same number sown broadcast. In the Champion Amber, both four pecks and six pecks gave much the best results when drilled. In all the experiments the drilled plats gave larger crops of straw than the ones sown broadcast. The experiments of this year were, therefore, on the whole, decidedly favorable to drilling.

The wheat on plats XLVII and XLVIII was dibbled in in the way described in last year's Report: "Rows were laid off by the plough, at the distance of 18 inches apart, and the seeds were dropped by hand, at intervals of six inches in the row, and carefully covered by the hoe. One peck dibbled in in this way is sufficient for an acre." These two plats were thoroughly hoed on March 22d. While their yields of grain were inferior to those of all the other plats, their crops of straw were respectively better than those of the plats on which four pecks of the same varieties were sown broadcast. It is also perhaps worthy of remark that one of the two most thinly seeded plats of all—XLVII, on which one peck of

Boughton was dibbled in—shows the highest ratio of straw to grain.

In comparing the two varieties, it will be seen that with four pecks sown broadcast the Boughton proved superior, and with one peck, dibbled in, equal to the Champion Amber, but that in all the other tests (6) it proved decidedly inferior.

In tabulating the results for the last three years, it is necessary to exclude all the tests with quantities of seed over four pecks, as this was the only amount of seed tested in 1880.

TABLE D.

EXPERIMENTS OF SECTION IV. FOR 1880, 1881 AND 1882.

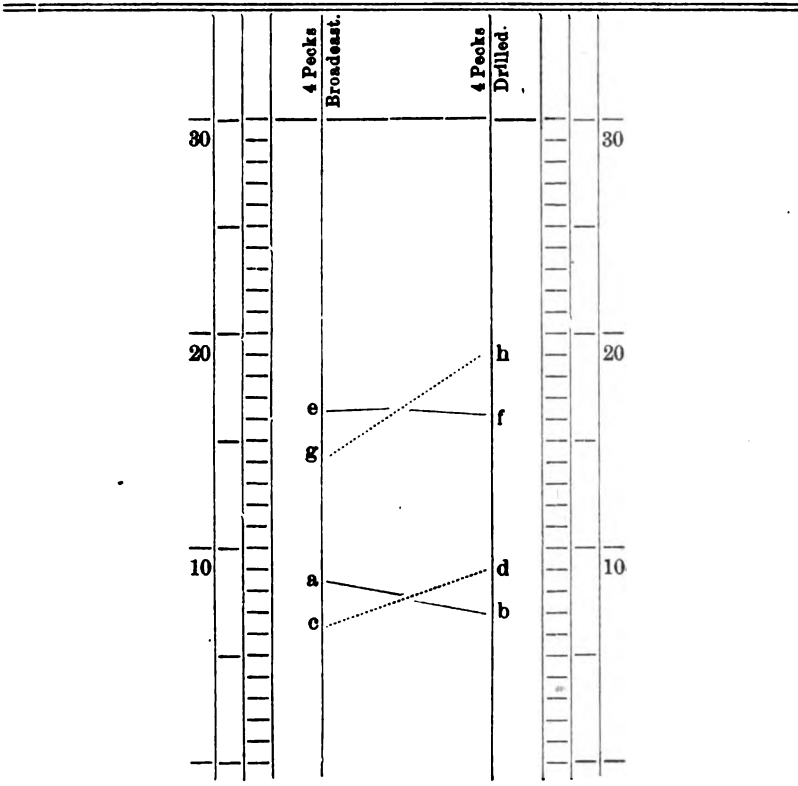
VARIETY.	How Seeded.	Straw and chaff per acre in pounds.				Grain per Acre in Bus.			
		1880.	1881.	1882.	Av.	1880.	1881.	1882.	Av.
Boughton	{ 4 Pecks Broadcast.	2,112	1,552	1,168	1,610	10.90	18.13	13.86	14.29
Boughton	{ 4 Pecks Drilled.	1,784	1,536	1,536	1,618	10.80	13.06	13.06	12.30
Champ'n Amber	{ 4 Pecks Broadcast.	1,920	1,632	720	1,424	7.70	14.66	10.66	11.00
Champ'n Amber	{ 4 Pecks Drilled.	2,720	1,408	1,264	1,797	14.90	14.40	16.26	15.18

From this table it appears that in the Boughton four pecks sown broadcast gave not only a better general average crop of grain than four pecks drilled in, but also a better crop each year. Drilling gave, however, rather the best average of straw. In the Champion Amber experiments, drilling gave much the best average crops of grain and straw. In 1881 broadcasting gave a little more grain, but in 1880 and 1882 greatly less. On comparing the two varieties we see that when sown broadcast the Boughton gave the better yield; when drilled, the Champion Amber.

The following diagram shows the conflicting nature of the results :

TABLE d.

GRAPHIC REPRESENTATION OF AVERAGES OF TABLE D.



Scale and letters as in Table a.

It is plain from the lines representing the yields of straw and grain, crossing midway between the verticals, that the difference in favor of the Boughton sown broadcast was about equal to that of the Champion Amber drilled in.

In summing up the results of the experiments of the past three years, all we are justified in saying is, that it would appear, when four pecks of seed per acre are used, that broadcasting suits the Boughton best, and drilling the Champion Amber.

If we compare the results of the experiments of this year and last, with six pecks per acre, we find that, as far as both varieties are concerned, drilling gave uniformly better results than broadcasting.

SECTION V.

Experiments Testing Modes of Preparation.

I explained in my preceding reports why I considered the experiments of this Section necessary. The preparation of the proper seed-bed for wheat is certainly a matter of very great importance, and unfortunately, there yet exists considerable difference of opinion in regard to this subject. Some hold that the land can not be too thoroughly prepared, nor too deeply. Some would make the surface very fine and smooth, by repeated harrowings and rollings. Others, again, advocate a shallow seed-bed, and as little preliminary cultivation as possible. For example, as far back as 1833 an English writer observes :

“Almost all seeds require a well consolidated bed after being well ploughed or digged, wheat and pulse particularly ; and this for two reasons : first, because the seeds are equally affected by the close contact of the medium in which they are laid, germinate more regularly, and take a firmer hold of the soil, and secondly, because seed-weeds are less likely to rise in a compact surface than in one which is loose, nor can slugs or grubs work their way so well in a close surface. Hence the use of rollers, pressers, and treading loose ground with sheep among farmers, and the practice of treading in seed by the gardener.”* A recent American writer, on the other hand, declares : “I consider too much cultivation a detriment to the crop, making the surface run together and forming a crust on the land, which prevents a proper circulation of the atmosphere through the soil, weakens the wheat plant in its earlier stages of growth, from which it never fully recovers.”†

In speaking of the influence which the seed-bed exerts on the harvest, Tanner, in one of his valuable little text-books, deplors the empiricism of the prevalent methods of preparing it. “The proper condition of the seed-bed may therefore be regarded as of the greatest importance. Although this is so self-evident that no one would think of disputing the fact, it must still be admitted that we are too much in the habit of neglecting many of the conditions which are calculated to promote the results we desire. We almost unconsciously drift into certain courses of procedure, without

*Main's Vegetable Physiology. London, 1833. Page 181.

†Michigan Board of Agriculture, 1880. Page 217.

taking into consideration the objects in view. Custom and established usage prescribe a certain depth as being necessary; this quantity of earth is consequently turned over, and the natural conclusion is, that we have thereby provided a satisfactory seed-bed.*

The experiments of this year were made to correspond as closely as possible those of last season, the only differences between them being with the following: 1st. Only one variety of wheat was experimented with this year, the Boughton. Two plats sown with this variety received a thorough preparation and two an inferior. The experiments were therefore made in duplicate. 2nd. The preparation of the plats marked "inferior" was even rougher than that of the corresponding plats last year. The plats were merely ploughed once, and received neither harrowings nor rollings. The seed was drilled in, and the surface left rough and cloddy. The preparation of the plats marked "thorough" was the same as that of all the other plats of the series. The land was well prepared by repeated harrowings and rollings, after being ploughed and cross-ploughed. A reference to the plan will show that the four plats named in the Table were situated among the plats of Series II, but the experiments are properly discussed under Series I. The past treatment (in preceding years) of each of the four plats was of course the same. The results of the experiments are given in Table V:

TABLE V.

EXPERIMENTS TESTING MODES OF PREPARATION.

Plats 1-16 Acre Each. Seeded October 29th. 4 Pecks per Acre. Unfertilized.

No. of Plat.	VARIETY.	Preparation.	Yield per Plat.		Yield per Acre.		Lbs. straw etc. to 1 lb. of grain.
			Straw, etc. Pounds.	Grain. lbs.	Straw, etc. Pounds.	Grain. bus.	
cxvii	Boughton.....	Thorough	71	39	1,136	10.40	1.82
cxxvi	Boughton.....	Thorough	121	44	1,936	11.73	2.75
cxxii	Boughton.....	Inferior.	92	40	1,472	10.66	2.30
cxvii	Boughton.....	Inferior.	120	45	1,920	12.00	2.66

The results present several points of interest. Between the best "thorough" plat and the worst there was a difference of 1.33 bush-

*Elementary Lessons in Agricultural Practice. London, 1881. Page 72.

els per acre. Between the best "inferior" plat and the worst the difference was practically the same, 1.34 bushels. Between the best "inferior" plat (12.00 bushels) and the best "thorough" plat (11.73 bushels), there was a difference of only 0.27 bushel in favor of the "inferior." Between the worst "inferior" (10.66 bushels) and the worst "thorough" plat (10.40 bushels), there was again practically the same difference (0.26 bushel) in favor of the "inferior." And if we take 11.33 bushels, the average of the two "inferior" plats, and compare it with the 11.06 bushels, the average of the two "thorough" plats, we find again the same difference of 0.27 bushel in favor of inferior preparation. This is a remarkably close agreement in the duplicate experiments, and the results show that a very rough preparation gave equally as good a crop of wheat as a very thorough one. Of course economy was on the side of the former. It should be noticed that there was not the same correspondence in the crops of straw.

In comparing the results of the experiments of this section for the last three years, we, of course, have to throw out the experiments with the Champion Amber last year and the year before, as they were not continued this.

TABLE E.

EXPERIMENTS OF SECTION V. FOR 1880, 1881 AND 1882.

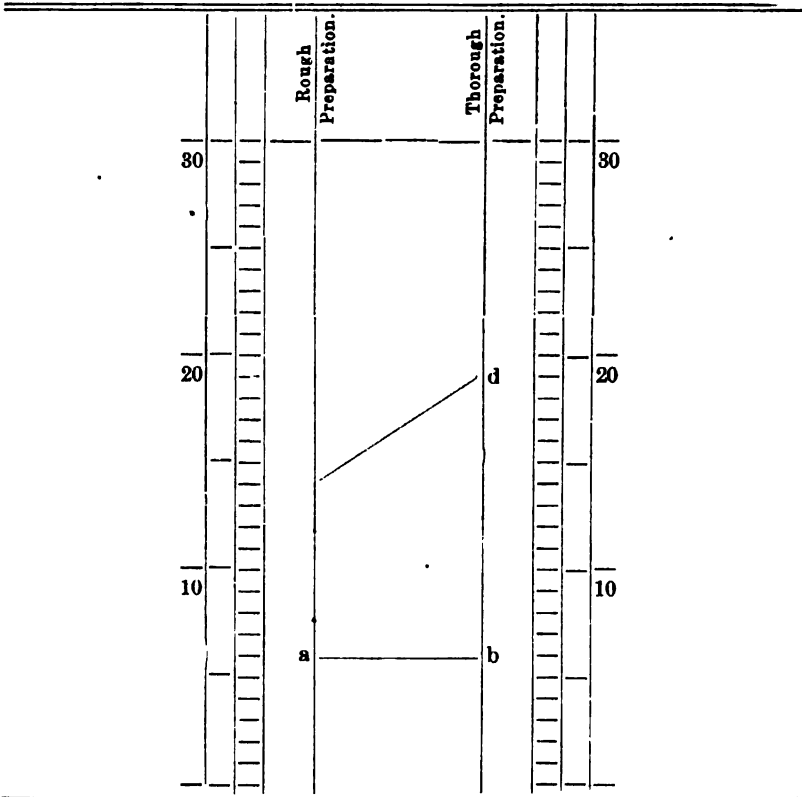
VARIETY.	Preparat'n	Straw and Chaff per Acre.				Grain per Acre.			
		1880. lbs.	1881. lbs.	1882. lbs.	Av. lbs.	1880. Bus.	1881. Bus.	1882. Bus.	Av. Bus.
Boughton ..	Inferior.....	1,784	592	1,696*	1,357	10.80	11.73	11.33*	11.28
Boughton ..	Thorough..	2,480	1,536	1,536*	1,850	7.70	13.06	11.06*	10.60

*Average of two plats.

It will be seen that the inferior preparation gave slightly the best average crop of grain, but the thorough preparation greatly the best crop of straw. In 1880 and 1882 the inferior gave the best yield of grain, but the thorough in 1881. In 1880 and 1881 thorough preparation gave much the best crop of straw; in 1882 inferior preparation gave slightly the best. The diagram brings out the great difference between the average crops of grain and straw for each mode of preparation :

TABLE e.

GRAPHIC REPRESENTATION OF TABLE E.



Scale as in Table a.

a b represents yield of grain of Boughton.

c d represents yield of straw, &c., of Boughton.

It should be noticed that the figures for 1882 represent the average of the duplicate plats.

The experiments of the three years show, therefore, a slight difference in favor of rough or inferior preparation—a very strange result.

SECTION VI.

Experiments Testing Modes of Culture.

The question is often asked, "Would not the English practice of working or cultivating the growing crop of wheat pay in this
6 Univ.

country?" In last year's report I mentioned the fact that even in England there was a difference of opinion in regard to this practice, in that, while some farmers held it to be very beneficial to the crop, others, and among them such an accurate observer as Stephens, believed it to be equally as injurious.* Doyle, an Irish writer on husbandry, is loud in his praises of the system of "drilling of corn crops." "Nor need a farmer," he declares, "fear that his intervals will be waste. Corn that is sown in the common way seems indeed to cover the ground better than in rows, but this is a mere deception of the eye, for the stalks of corn are never so thick as when they come out of one plant, or as when they stand in a row; it is only the different placing that makes the broadcast crop seem the larger, and even this is only when both crops are young. And farther, it has been abundantly proved that where the intervals have been greatest, the largest crops have been produced, and those where hoeing was used, without manure, have been richer than where manure was used and hoeing omitted, because the plants receive their growth not according to the ground they stand on, but the ground they can extend their roots into. In drills, the earth can be stirred (and in stiff grounds will be particularly benefited by it) with either a horse or hand hoe, by which the plants will have supplies of nourishment, which they could not have when scattered over the whole ground and occupying every inch of it."† Whatever views we may hold in regard to the cogency of his reasoning, we must admit that Doyle is certainly most positive in the statement of what he holds to be facts.

Wilson and Thornton, whose article on Agriculture in the forthcoming edition of the *Encyclopædia Britannica*‡ has already been referred, to are by no means so dogmatic in the assertion of their views. In fact, they very frankly admit the conflict of opinion in regard to this practice: "The mere stirring of the soil is considered by many farmers to be so beneficial to the wheat crop that they use the horse-hoe irrespective of the presence of weeds. Others are of opinion that, apart from the destruction of weeds, hoeing is injurious to grain crops, alleging that the cutting of their surface roots weakens the stems and increases their liability to fall over.

*Farmer's Guide, Vol. II. Page 116.

†The Works of Martin Doyle. Dublin, 1830. Page 81.

‡Vol. I. Page 356.

Carefully conducted experiments are required to settle this point. We have no personal experience bearing upon it beyond this, that we have repeatedly seen a wheat crop much benefited by mere harrowing in spring." Such an admission coming from Great Britain, where this practice of cultivating wheat has prevailed for a century past, and where it would seem that experience should have long since reached a definite conclusion in regard to it, is certainly most remarkable, and shows very clearly the profoundly difficult nature of unsettled points in agricultural practice.

In France it would seem that the drill system of husbandry has not been generally adopted, for Casanova observes, in treating of wheat: "In England, many cultivators sow in drills; in France, they generally sow broadcast."*

The wheat on the cultivated plats of this Section was sown in rows eighteen inches apart, by shutting off every other tube of the drill. On the plats marked "not worked," the wheat was of course drilled in in the usual way. Plats XLIX and L were well worked with the hoe, and LI and LII with the plough, on March 22nd. The results of the experiments are given in Table VI:

TABLE VI.

EXPERIMENTS TESTING MODES OF CULTURE.

Plats 1-16 Acre each. Seeded October 19th and 20th. Unfertilized. Drilled in two ways.

No. of Plat.	VARIETY.	Treatment.	Am't of seed per acre. Pecks.	Yield per Plat		Yield pr. Acre		Lbs. of Straw, etc. to 1 lb grain
				Straw, etc., lbs.	Grain. lbs.	Straw, etc., lbs.	Grain. bus.	
xlix	Champion Amber	{ Hoed	2	35	40	560	10.66	0.87
l	Boughton	{ M'ch 22.	2	84	41	1,344	10.93	2.05
xiii	Champion Amber	Not worked	2	118	82	1,888	21.86	1.44
xiv	Boughton	" "	2	116	69	1,856	18.40	1.68
li	Boughton	{ Plowed	4	80	35	1,280	9.38	2.28
lii	Champion Amber	{ M'ch 22.	4	57	33	912	8.80	1.78
xvii	Champion Amber	Not work'd	4	79	61	1,264	16.26	1.29
xviii	Boughton	" "	4	96	49	1,536	13.06	1.96

Taking up first the experiments with two pecks of seed per acre, we see that the unworked Boughton plat gave 18.40 bushels per

*Premiers Pas dans l'Agriculture. Paris, 1866. Page 109.

acre, while the worked one gave only 10.93 bushels, a difference of nearly 75 per cent. in favor of the former. The unworked Champion Amber plat gave double the number of bushels of the worked one (the former gave 21.86 bushels, the latter 10.66 bushels). The crop of straw of XLIX was remarkably small, and the ratio of straw to grain very low. When we examine the plats seeded with four pecks, we find the results in favor of "no cultivation" almost equally as pronounced, for the unworked Champion Amber plat gave 19.26 bushels per acre and the worked one only 8.80 bushels; the unworked Boughton plat 13.06 bushels and the worked one only 9.33 bushels. If we examine the crops of straw, we find the same difference in favor of the unworked plats. But these marked differences must not be considered as altogether due to the injurious effects of cultivation on the growing crops. They were doubtless caused in large part by the superior fertility of the unworked plats. As in a series of years the accidental advantage of superior fertility is as likely to lie on the side of the unworked as the worked plats (it is probable that such really was the case last year), it will be better to dismiss the tests of the present year without further comment, and to pass at once to the consideration of the average results of the experiments of this section for the last three years. These averages are set forth in Table F:

TABLE F.

EXPERIMENTS OF SECTION VI FOR 1880, 1881 AND 1882.

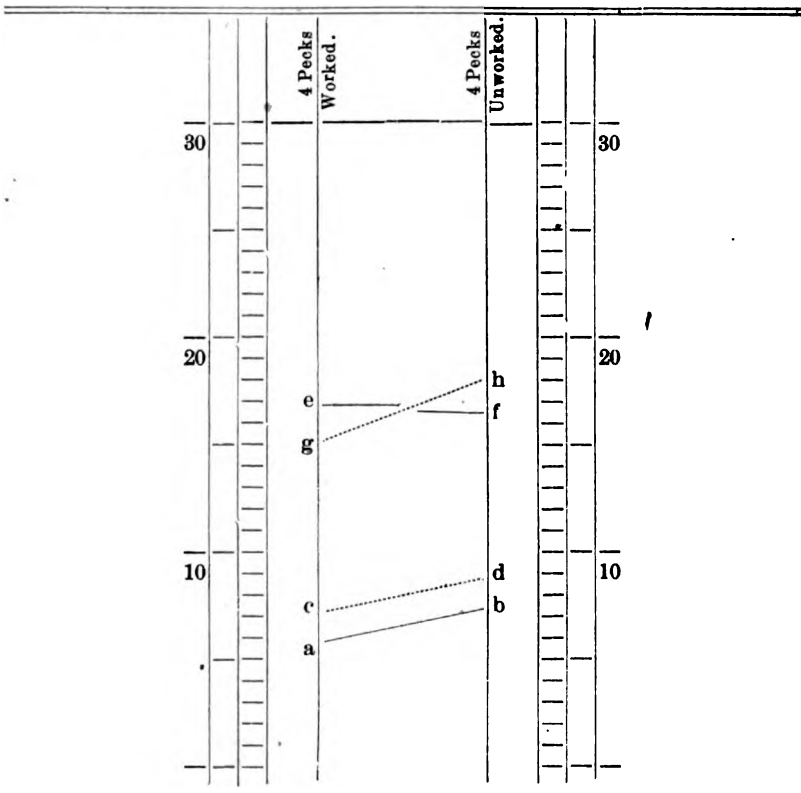
VARIETY.	Culture.	Pecks of seed pr acre	Straw and Chaff per Acre in Pounds.				Grain per Acre in Bushels.			
			1880.	1881.	1882.	Average	1880.	1881.	1882.	Average
Boughton.	Worked.	4	2,552	1,008	1,280	1,613	6.00	15.20	9.33	10.17
Boughton.....	Unwork'd	4	1,784	1,536	1,536	1,618	10.80	13.06	13.06	12.30
Champ'n Amber	Worked.	4	1,792	1,952	912	1,552	13.30	18.13	8.80	13.41
Champ'n Amber	Unwork'd	4	2,720	1,408	1,264	1,797	14.90	14.40	14.40	15.18

As in 1880 there were no experiments with two pecks per acre, the results of the experiments with four pecks are the only ones given in the Table. It will be seen that these averages are unfav-

vorable to the practice of cultivating or working the growing wheat. For example, the unworked Boughton plats gave an average of 2.13 bushels more per acre than the worked ones, and the unworked Champion Amber plats an average of 1.77 bushels more than the worked. The unworked plats of each variety gave also the best crops of straw. The following diagram serves to illustrate these results:

TABLE f.

GRAPHIC REPRESENTATIONS OF AVERAGES OF TABLE F.



Scale and letters as in Table a.

It also shows that the Champion Amber gave a better average yield of grain than the Boughton. In 1880 and 1881, all the Champion Amber plats gave better crops of grain than the corres-

ponding plats of the Boughton, but with the worked plats the reverse was the case. The worked Boughton plats gave a better average of straw than the worked Champion Amber ones. It is evident that as far as the comparative merits of the two varieties are concerned, the results of the tests, not only of this Section but of the entire Series, for the last three years are greatly in favor of the Champion Amber. In summing up the results of the experiments of this Section for 1880, 1881 and 1882, I think we are justified in holding that they are strongly opposed to the English practice of working wheat. It is not denied that this practice adds considerably to the cost of the crop; these tests show that it adds nothing to the yield.

SERIES II.

In last year's report I gave a rapid review of the various views which have prevailed from time to time in regard to the nutrition of plants and the action of fertilizers. I stated therein that until the advent of Leibig the organic or humus theory of manures was the dominant one. This theory held that plants drew their nourishment exclusively from the organic matters of the soil. Basing their arguments on analogy, its advocates taught that plants, like animals, required for their support organic substances "of a chemical composition more or less analogous to that of their tissues." An old writer stoutly affirms: Hence we conclude that if any substance is offered as food, of a different nature from the body to be nourished, that difference must be taken away to render it homogeneous; and hence it appears that whatever can afford nourishments to plants must be either:

1. Substances analogous to, or of the same nature with, what pre-existed in the plants; or,
2. Such as can be changed into a state suited to the nature of the plants with which they are to be combined."

This theory succumbed to the attacks of Liebig. Still there are some who hold, even at this day, that plants can appropriate the decaying organic matters, and more especially the organic acids of the soil. To Liebig is generally and justly ascribed the credit of establishing, in opposition to this, the mineral theory of manures

—a theory which teaches that its mineral matters, so far from being accidental impurities, are constituents of the most supreme importance to the plant, and the only ones necessary to be added to the soil in order to insure its continuous fertility. The promulgation of Liebig's views certainly constitutes a new departure in agricultural practice, and their general acceptance has developed one of the largest manufacturing industries of the present day.

The French Agricultural Chemist, Grandeau, in a recent work, calls attention, however, to the fact that Liebig was not the first to propound this doctrine. In treating of the nutrition of the plant he observes: "As an introduction to the discussion of the doctrines which have in turns occupied and dominated the agricultural stage, I propose to prove, on the one hand, that the importance of the mineral matters in vegetation had already been suggested a very long time ago: on the other, that in consequence of the total oblivion into which the writings to which I allude had fallen, the propositions advanced by Liebig in 1840 constituted at the time a great scientific novelty and a veritable agricultural revolution."* He then proceeds to state that the celebrated French potter, Bernard Palissy, who flourished in the 16th century, was the first one to set forth precise views as to the role of mineral matters in vegetation and to offer a rational explanation of the true cause of the fertilizing properties of dung. "One can not but feel," he says, "a profound sentiment of admiration for the sagacity of this great genius in reading the following passage, taken word for word from the *Treatises on Different Salts* and *on Agriculture*, published in 1563, passages which one would think were written by a contemporary agriculturist." Some of the extracts given by Grandeau are certainly remarkable. In one place Palissy says: "If any one sows a field for several years without manure, the seeds remove the salt of the soil for their growth and the earth becomes by this means denuded of salt, and can not produce longer." Again, in speaking of the method pursued in the Ardennes of cutting down and burning the timber, and spreading the ashes on the fields for the use of the subsequent crops, he declares that the increase in the produce is due to the salt which the burnt vegetable matter has left in the soil. Elsewhere he remarks that manure is applied

* Course d'Agriculture de l'Ecole Forestiere, Part I. Paris, 1879. Page 32.

to a field in order to restore to it a part of that which has been taken from it; * * * that in sowing wheat it is hoped that the seed will produce a large crop; such a crop will necessarily remove certain matters from the soil, and if the field has been cropped many years, its substance [or fertility] is carried away in the straw and grain, * * * and that all kinds of excrements should be used in order to restore to the soil, if possible, the identical matters taken from it."

On these and many other similar passages Grandeau makes the following comment: "Is it not truly wonderful to meet with, in a writing of the middle of the 16th century, the foundation of a doctrine which has appeared so new and so strongly opposed to the idea which have found acceptance as late as forty years ago? It did not seem to me possible to write the history of the theory of the mineral nutrition of vegetable without restoring the immortal potter of Saintes to his rightful position, and without bringing to light his ideas, as original as they are conformed to the opinions of our day."* In taking leave of Palissy, Grandeau observes: "I have said that the writings of the author of the *Treatise on Salts* were neglected by his contemporaries; the same thing is true of the generations which followed him, for one searches in vain in the numerous agricultural works published between 1580 and 1840 for any passages recalling, directly or remotely, the views of Bernard Palissy."†

Now Grandeau is mistaken in the opinion that the ideas of Palissy escaped the notice of his contemporaries and successors. They may not have met with general acceptance but they certainly did not pass unchallenged by subsequent writers. For example, in a work published about the year 1760, "The Natural and Chemical Elements of Agriculture," the 'noble auther (Gyllenborg) strongly opposes the doctrine that salts afford direct nourishment to plants. He devotes a chapter XIII to the discussion of this doctrine. He thus prefaces this chapter: "Many, both ancient and modern writers on husbandry, have ascribed to salts a very great efficacy in promoting vegetation; being of opinion, though ill founded, that salts only contribute to the nourishment of plants, but also that

*Ibid. Page 36 and 37.

†Ibid. Page 38.

the fruitfulness of the earth is entirely owing to them. We shall now inquire how far this opinion is just, either of particular salts, or of salts in general.”* He then proceeds to notice the experiments and observations of Kraftius, Alston, Bonnet, Camden, Pott, Brookman, Mayow, Glauber, Bacon, Digby, Lemery, Vallemont, Nieuwentyt, Eekilsson, and others, bearing upon this subject. In one place, in speaking of the alleged beneficial effects of ashes, he takes direct notice of one of the facts mentioned by Palissy as supporting his views in regard to the action of salts. He remarks: “It is said that the English enrich their soils by mixing with sand burnt vegetables and their *ashes*. Others manure their land with burnt liver-wort, or with the ashes of burnt wood, &c. They boast of the large crops which are obtained from land where a crop has been burnt down; and, they plead that an *alkaline salt* is to be found in every rich soil, agreeable to Hierne’s and Kulbel’s experiments.”† He sums up the chapter with the observation: “We therefore conclude, that no mineral or artificial salts, nor any mineral earths, contribute to the nourishment of plants.”‡ In another chapter (VII) he asserts that, “no mineral earth (that is, earth newly dug and unmixed with any heterogeneous matter) enters as a nourishment into plants,” and remarks that “Mr. Jethro Tull was the first who maintained the contrary opinion, in which he has been supported by Duhamel, Du Monceau (*Traite de la Culture des Terres*), and others, who think that earth is the principal food of vegetables. Lord Bacon’s opinion is more natural, that earth serves only as a support to plants and to defend them from heat and cold. It is now well known that plants which have not any communication with the earth, are nourished by their leaves the same as by their roots.”§

Now, even granting that the views of Palissy did not meet with general acceptance, these passages make it abundantly evident that the doctrine of mineral manures was warmly discussed long before the days of Liebig. And it does seem strange to read of these old worthies appealing, like the scientists of to-day, to observation and experiment in support of their several views; and stranger yet, to be told by them of water culture, a process heretofore regarded as

*Elements of Agriculture, (Translation). London, 1770. Page 116.

†Ibid. Page 126.

‡Ibid. Page 80 and 81.

§Ibid. Page 130.

the peculiar product of our own times. Some of their experiments were conducted with such accuracy and care that I cannot refrain from giving one or two of the most important in full. As they bear directly on the question before us, I hope the seeming digression may be pardoned.

Gyllenborg, speaking of "water so far as it promotes vegetation," goes on to observe: "Daily experience teaches us, that vegetables cannot grow without water; and we find that their growth is proportioned chiefly to the quantity of rain water which they receive. Many ancient and modern naturalists, seeing plants grow in clear water, have from thence concluded, that water is the only food of plants: and on the other hand many, not conceiving how the different parts of which vegetables are composed could take their origin from pure water, have considered water rather as a vehicle, than as the nourishment of plants. Endeavors have been used to support each opinion by experiments, of which I shall here give a short account.

"The experiments hitherto made in order to prove that water constitutes the real food of plants are of two kinds: the first relate to the soils, and are instituted to determine what they afford; and the others regard the water only.

"Van Helmont was, I think, the first who, by a remarkable experiment, showed that the earth contributed nothing to the nourishment of plants. 'I took,' says he, pages 104 and 130 of his works, 'an earthen vessel, and put into it two hundred pounds of earth dried in an oven; I moistened that earth with rain water and planted in it a cutting of willow which weighed five pounds: this cutting produced a tree, which at the end of five years, weighed an hundred and sixty-nine pounds and about three ounces. The earth was moistened when necessary with rain or distilled water. The vessel was large, and fixed in the ground; and lest any flying dust might mix in the earth with it, it's mouth was covered with a tin plate pierced with a number of holes. I did not reckon the weight of the leaves which fell during the first four years. At the end of the fifth year, I dried the earth contained in the vessel, and found it weigh its first weight of two hundred pounds, wanting only two ounces.' Robert Boyle made a similar experiment with gourds, with the like success. After these, Gleditsch and Bonnet took a different course, and found that vegetables grow *without earth* provided they have plenty of air and water: for they experienced that

plants set in moss or sponge kept in glasses and moistened with water, grew well and flourished: (*Mem. de Mathem. et Phys. Tom. 1, p. 420, etc., Comm. Lips. Tom. 1, p. 34, etc.*) and still more lately, M. Duhamel, (*History of the Academy of Sciences for the year 1748, p. 272, etc.*) has repeated nearly the same experiments, and found, upon an accurate examination and chemical analysis of plants which had grown in water, that they contained the very same parts as other plants of the same sort which grew in earth; from whence he justly concludes, that those parts were introduced by *pure water*.* These experiments breathe the true scientific spirit.

From all that has been said in this and preceding reports, it would seem, then, that what we esteem the most vexed and important agricultural questions of our day, the theory of vegetable nutrition and the action of manures have been studied and discussed for more than two hundred years, and that they are still open and unsettled (as many yet hold) serves only to show as elsewhere remarked, the profoundly difficult nature of such problems.

The views now prevalent in regard to these questions may be briefly stated as follows: Liebig's estimate of the value of the mineral constituents of plants has been generally accepted, and it is now almost universally taught that it is necessary to restore to the soil, in the shape of manures, the more important mineral elements taken from it by the crops: hence, no one in these days denies the value of potash, phosphoric acid, lime, etc. But as to the best mode of restoring these several matters to the soil—whether for example potash can be more economically supplied in the form of sulphate or in the form of chloride, and whether basic, reverted or acid phosphate of lime will give the most satisfactory results—opinions widely differ. Some of these secondary questions will be noticed more fully further on. Again, while but few now hold that organic matters are taken up directly by the crop, the majority believe that they supply one of the most important elements required by plants, and hence, place a high value upon nitrogenous manures. Liebig, it will be remembered, first taught that the application of such manures was unnecessary, as plants could supply themselves with nitrogen from natural sources. Such views no longer prevail, although some still contend that a certain order of plants (the Legu-

*Ibid. Page 67 to 79.

minosæ) have the power of appropriating the nitrogen, or at least the ammonia, of the air, and storing it up in their tissues. Of course these teach that the cheapest way of restoring nitrogen to the soil is to grow such crops and plough them under green. In last year's report I took the pains to show that the weight of opinion was against this view, and that the best authorities hold that the nitrogen in these crops is drawn from the soil or sub-soil, and not from the air.* As to the comparative manurial values of ammonia nitric acid and organic nitrogen, there is, yet, great difference of opinion. One thing seems to be clearly settled, however, that nitrogen, phosphoric acid and potash are the three most valuable constituents of manures.

The experiments of this Series bear on some of the questions stated above.

It has been already mentioned that the plats of this Series were situated in the same field with and just across the road from those of Series I. (See preceding plan). An account of the soil, aspect, etc., of this field is given in the two former reports. Attention will be called under the appropriate sections to any differences in the past history of the several plats of this Series. The land was thoroughly prepared and the fertilizers applied in the manner described in last year's report. The soil was of fair average fertility. Four pecks per acre of Boughton wheat were drilled in on October 29th. The prefixed plan shows the great increase (as compared with last year) in the number of plats left unfertilized for the purpose of comparison. These plats, 13 in all, were so arranged as to thoroughly triangulate the field. In each row of plats, whether taken parallel with or perpendicular to the road, we find one or more left unfertilized. These plats are marked on the plan with asterisks.

SECTION VII.

Experiments Testing Commercial Fertilizers.

The manufacture and sale of commercial fertilizers have of late years assumed immense proportions. The Annual Report of the Commissioner of Agriculture of the State of Georgia, for 1880, gives the following statement as to the "comparative trade in fertilizers," in that State :

*Pages 84 and 85.

"	"	"	"	"	"	"	"	1875-76,	55,816 Tons.
"	"	"	"	"	"	"	"	1876-77,	75,824 "
"	"	"	"	"	"	"	"	1877-78,	93,478 "
"	"	"	"	"	"	"	"	1878-79,	85,049 "
"	"	"	"	"	"	"	"	1879-80,	119,583 Tons.**

In the Annual Report of the North Carolina Agricultural Experiment Station for 1881, it is said that, "Sixty thousand tons of fertilizers were sold in the State in 1879, and eighty thousand in 1880."† The Commissioner of Agriculture of South Carolina, in his Report for 1882, estimates the total shipments of phosphatic rock from the State between the years 1870 and 1882, inclusive, at 948,852 tons. In 1870 the shipments amounted to only 1,989 tons, in 1882 they reached 140,772½ tons.‡

The fertilizers sold are usually classed under the three following heads: *potassic*, or those containing potash; *phosphatic* or those containing phosphoric acid; and *nitrogenous*, or those containing nitrogen. The potash is derived from ashes, kainite, the salts of potash (muriate, sulphate and nitrate) etc.; the phosphoric acid, from bones, bone-black, bone-ash, guanos, mineral phosphates (apatite, phosphorite, South Carolina phosphatic rocks) etc.; and the nitrogen from animal matters (raw bone, blood, fish, dried flesh, hair, horns, leather), guanos, vegetable matters (bran, cotton seed, cotton seed meal, etc.), sulphate of ammonia, nitrates of soda and potash, etc. A fertilizer, now largely used at the South, often called Guano-Kainit contains considerable percentages of all three of these valuable constituents and is perhaps the cheapest and best potassic manure. Average samples, according to Armsby & Jenkins, contain about 18 per cent. potash.§ The phosphoric acid is generally supplied by bones or South Carolina phosphatic rocks. The former coarsely ground are called bone-meal; finely ground, bone flour. The average of 110 American analyses of bone-manures shows 3.3 per cent. nitrogen and 21.7 per cent. phosphoric acid (equal to 47.3 per cent. phosphate of lime).||

The Carolina crude phosphate finely ground by ordinary buhr stones (the usual method) is known as ground phosphate. It is

*Page 21.

†Page 23.

‡Page 81.

§The Farmer's Annual Hand-book for 1882. Page 175.

||Ibid. Page 176.

considered more insoluble than ground bone of equal fineness. Lately a new process of grinding the rock has been perfected and patented. By this process it is reduced to an impalpable powder, so light and fine, as to float readily in the air; hence the new and somewhat uncouth name of the product, *floats*. In this state of extreme division it is held by many to be almost, if not fully, as soluble as the superphosphate, or so-called acid phosphate. The comparative agricultural value of the three forms of phosphate of lime, a question of the highest scientific interest and great practical importance, will be discussed under a different section, but as the new article is attracting much attention in some sections of the South, the following account of the process taken from a valuable article, by Dr. F. L. Frost, of Charleston, S. C., in the Report of the Commissioner of Agriculture of South Carolina for 1882, may prove of interest to our farmers:*

"This extreme comminution is effected by the use of the Duo Atomizer Mill, invented by our fellow townsmen Mr. H. A. Duo Jr., a man of great natural talent and most remarkable inventive genius."

"Heretofore the old French Buhr stone was our sole dependence. To any thinking man this seemed a very rude contrivance, suited only to the most primitive ages; for half the power and half the wear and tear were applied to the grinding or destruction of the instrument itself, the Buhr stone, and were consequently lost to the object in hand, the grinding of the phosphate rock. Furthermore it was found impossible to reduce the rock to what was conceived to be the requisite degree of fineness, owing to certain insurmountable difficulties; for as each particle of phosphate rock, in the process of grinding, was broken, the number of such particles was doubled, and consequently, there would be double the resistance to further reduction; and thus as the grinding progressed, in intensive ratio the resistance increased, until finally, the power remaining the same, the practical limit to sub-division was soon reached. And this *inherent* difficulty, was further increased by the *accidental* ones of obstruction and lubrication; for the rock, being fed in at the center of the stones, in order to effect its exit had to work its way out to the periphery. Now, owing to the rock not being of abso-

*Page 156.

lutely uniform density, and to the impossibility of keeping the stones absolutely true there would be unequal action in the grinding, some particles undergoing reduction much more promptly than others; such particles, being more or less remote from the periphery, and thus not able to make their immediate escape, not only offered resistance to the work by obstruction, but, being very fine and smooth, they further hindered it by a practical lubrication of the larger particles, thus thwarting the process of attrition and consequent comminution."

"These difficulties have all been overcome by Mr. Duc in his atomizer mill. By this mill the rock is made to grind itself by the attrition of rock against rock. The whole power is made to apply itself to the work in hand, and there is no wear and tear upon the mill itself.

"The mill consists of an iron disc, five feet in diameter, into which the rock is introduced; the disc is then made to revolve; by centrifugal force the rock applies itself firmly to the interior periphery, forming a surface upon which a certain mass of the rock (which, by a simple device, is not allowed thus to obey the centrifugal force) is ground. The mill is relieved of the ground material by suction applied at the centre of the disc. In proportion to the gentleness of this suction or draft will be the fineness of the product.

"It is thus that the material called Floats is *mainly* produced."

Nitrogenous manures vary in their percentages of nitrogen, from the 19.7 per cent. of sulphate of ammonia and the 15.8 per cent. of nitrate of soda down to the 6.5 per cent. of cotton seed meal, the 5.1 per cent. of wool-waste, the 4.4 per cent. of malt-sprouts and the 2.3 per cent. of niter-cake.

As remarked in last year's Report, ground bones, or ground mineral phosphates, acted upon by sulphuric acid are called indifferently superphosphate of lime. The addition of nitrogenous matters converts these into ammoniated superphosphates and dissolved bones, or into the so-called guanos. These two kinds, ammoniated superphosphates, and acid phosphates (or dissolved bones) constitute the great bulk of the fertilizers offered for sale in the markets of the country. In the Report of the Commissioner of Agriculture of Georgia for 1880, already referred to, it is stated that out of the 119,583 tons put "upon the market during the past season, 104,838

tons were Ammoniated Superphosphates, and 13,906 tons were Acid Phosphates or Dissolved Bones.*

In addition to the fertilizers experimented with the two preceding seasons (a list of these, with prices per ton and per pound will be found on Page 53 of Report of 1881), the Knickerbocker, a Baltimore brand, was tested this year.

The plats of this Section were in the same field with, and just across the road from, those of Series I. The soil of all the plats like that of the rest of the field, a calcareous loam, was apparently of uniform quality and fair average fertility. In 1880 this part of the field was in corn. The corn was cut and removed from the field early in September of that year and the land immediately seeded with rye. No manures of any kind were used on the corn or rye. The latter made a vigorous growth and was ploughed under towards the last of April, 1881, when it was about 5 feet high, and just beginning to head out. The land was thoroughly prepared by frequent harrowings and rollings, and again planted with corn early in May. A compost of $\frac{1}{3}$ plaster, $\frac{1}{3}$ bone-meal and $\frac{1}{3}$ muck was used on the crop, at the rate of one handful to each hill. The corn was taken from the field in September and the land thoroughly ordered for wheat. The preparation was most excellent. The conditions and results of the tests are fully set forth in Table VII.

*Page 21.

TABLE VII.

EXPERIMENTS TESTING COMMERCIAL FERTILIZERS.

Plats 1-16 Acre each. Drilled Oct. 29th. 4 pecks per Acre. Boughton.

No. of Plat.	FERTILIZER.	Lbs. of Fertilizer pr acre	Yield per plat		Yield per acre		Lbs. Straw &c., to 1 lb. of Grain.
			Straw &c. lbs.	Grain. lbs.	Straw &c. lbs.	Grain. Bus.	
xc	Clotworthy's Bone Meal.....	100	167	78	2,672	20.80	2.14
xevi	Same	200	164	81	2,624	21.60	2.03
cii	Same	300	116	59	1,856	15.73	1.96
xcii	Baldwin's Bone Compound..	100	174	76	2,784	20.27	2.29
xciii	Same	200	138	64	2,208	17.06	2.15
xciv	Same	300	164	66	2,624	17.60	2.43
xcv	Ober's Ammoniated Su- } perphosphate of Lime... }	100	136	64	2,176	17.06	2.12
ci	Same	200	98	52	1,568	13.86	1.88
cv	Same	300	75	35	1,200	9.33	2.14
xcvii	Unfertilized.....	.....	113	57	1,808	15.20	1.8
xcviii	Soluble Pacific Guano.....	100	151	74	2,416	19.73	2.04
xcix	Same	200	113	62	1,808	16.53	1.82
civ	Same	300	112	53	1,792	14.13	2.11
c	Unfertilized.....	.....	89	36	1,328	9.60	2.47
ciii	Same .....	.....	124	73	1,984	19.46	1.69
cvi	Chesapeake Guano.....	100	79	36	1,264	9.60	2.19
cvii	Same	200	111	64	1,776	17.06	1.73
cxi	Same	300	95	50	1,520	13.32	1.90
cviii	Anchor Brand.....	100	136	74	2,176	19.73	1.84
cix	Same	200	96	49	1,488	13.06	1.89
cxiii	Same	300	127	78	1,872	20.80	1.63
cx	Unfertilized.....	.....	91	44	1,456	11.73	2.07
cxii	Knickerbocker	100	108	52	1,728	13.86	2.08
cxix	Same	200	109	56	1,744	14.93	1.94
cxxi	Same	300	79	53	1,264	14.13	1.49
cxiv	Star Brand	100	109	56	1,744	14.93	1.94
cxv	Same	200	101	54	1,616	14.40	1.87
cxvi	Same	300	91	54	1,456	14.40	1.63
cxvii	Unfertilized.....	.....	71	39	1,136	10.40	1.82
cxix	Same .....	.....	85	47	1,360	12.53	1.81
cxiii	Powell's Prepared Chem- } icals..... }	100	93	62	1,488	16.53	1.50
cxiv	Same	200	81	44	1,296	11.73	1.84
cxv	Same	300	100	50	1,600	13.33	2.00
cxvii	Unfertilized.....	.....	121	44	1,936	11.73	2.75
lxxxix	Rotted Manure worked in } before seeding	16 tons	128	72	2,048	19.20	1.77
cxviii	Green Manure worked in } before seeding	16 tons	128	69	2,048	18.40	1.85
lxxxiv	Unfertilized.....	.....	134	58	2,144	15.47	2.31
lxxxvii	Same .....	.....	135	67	2,160	17.86	2.01

Average of 9 unfertilized plats, 1,701 lbs. straw and 13.77 grain per acre.

7—Univ.

The number of plats left unfertilized for the purpose of comparison is worthy of remark. There were nine in all, so situated as to thoroughly triangulate the field. The positions of these plats are shown in the preceding plan. The first thing that will arrest the attention is the striking difference between their yields. While their average is 13.77 bushels of grain (and 1,701 pounds of straw) per acre, there is a difference of more than 100 per cent. between the yield of c (9.60 bushels) and that of the neighboring plat ciii (19.46 bushels). The yields of cx, cxviii, cxix and cxxvi do not vary materially from the general average of all. These differences in the yields of plats, apparently alike in situation and soil, show the difficult nature of field experiments and the danger of drawing conclusions from differences in the crops of one or two fertilized and unfertilized rows, of any given field. Where the standard of comparison is unreliable, the conclusions drawn must, as a matter of course, be more or less untrustworthy. As remarked in a preceding part of this Report, comparative certainty can only be attained by providing a large number of unfertilized plats, by repeating each experiment several times and by continuing the tests for a number of years. In the observations of the astronomer or the determinations of the laboratory, it is only to the averages of a large number of readings or tests that a reasonable mathematical certainty attaches. In the celebrated experiments of Gilbert and Lawes the weak point in several of the series is the small number of the unfertilized plats used as the standards of comparison. In their experiments in top-dressing meadows there are but two unmanured plats, and very frequently important conclusions are drawn from comparisons of the yields of fertilized plats, not with the averages of the two unfertilized plats, but with those of the nearest unfertilized one. In some cases it is certainly necessary to consider the yield of each unfertilized plat as well as the average of all, for it is hardly safe to attribute any beneficial action to an application which, while it gives a yield superior to the average yield of the unfertilized plats, does not give one equal to that of the best fertilized plat. The question as to the true standard of comparison in such cases as these is both a nice and a difficult one, but the position of Johnston in regard to it is in the main correct. He remarks: "But in what way are the results of the two or more experiments we may make to be regarded? Are we to take the

mean or average result of the whole, and to consider this as an expression of the absolute natural productiveness of the land where nothing is applied to it, or of the absolute effect of this or that substance which we may have laid on? Or are the results of the several experiments of each kind to be compared each with each, and the absolute effects to be deduced according to some other method."

"For example:

"Suppose three several portions of a field of wheat to yield, without manure, at the rate of 18, 21, and 24 bushels of grain respectively, the mean being 21 bushels and that a fourth portion, to which a certain manure is applied, yields also at the rate of 24 bushels, are we to compare this last result of 24 bushels with the mean 21, and infer that the substance applied increased the crop by 3 bushels; with the number 18, and infer that it had increased it by 6 bushels; or with the number 24, and say that the application had done no good at all? In such a case as this, the reader will, I think, agree with me that no conclusion can be drawn as to the effects of the substance applied, inasmuch as the crop it produces is not greater than one portion of the field had produced without any application."*

According to this view, it would appear from Table VII that but 4 out of the 29 applications were attended with any beneficial results; for plats XC, XCVI, XCII and CXIII alone show yields superior to that of CIII, (19.46 bushels), the best unfertilized one. Between its yield and those of XCVIII, CVIII and LXXXIX there is practically no difference.

The somewhat remarkable fact, commented upon in the corresponding section of last year's Report, is again observable in the tests of the present year; namely: That heavy doses of any given fertilizer generally gave yields inferior to those afforded by lighter ones. In 5 out of the 9 tests of different fertilizers, 100 pounds per acre of the same manure, gave better results than either 200 pounds or 300 pounds. In one of the remaining 4 tests 100 pounds gave better results than 200 pounds, and in another, than 300 pounds, and in 2,200 pounds gave better results than 300 pounds. In the Knickerbocker tests there was scarcely any difference in the

*Experimental Agriculture. By J. F. W. Johnston, Edinburgh and London, 1849. Page 52.

yields of the 3 applications. For a discussion of these anomalous results reference must be had at last year's Report.*

If we examine the results more in detail it is evident that 200 pounds of Clotworthy's bone meal (a very pure article manufactured in Knoxville) gave the best results, and 100 pounds the next best. Three hundred pounds of this bone gave, however, a crop of grain much inferior to that of the best unfertilized plat. Its yield of 15.73 bushels is only about 2 bushels more than the average of the 9 unmanured plats (13.77 bushels). The three applications of Baldwin's Bone Compound show, as compared with the average of the unfertilized plats, a considerable increase, but as compared with the best unfertilized plat the 200 pound and 300 pound applications show a loss. Three hundred pounds of Ober's Ammoniated Superphosphate of lime gave a yield inferior to that of the worst unfertilized plat. As compared with the average of the unmanured plats all the applications, with the exception of this one, and 100 pounds of Chesapeake Guano, show gains.

For Powell's Prepared Chemicals, a fertilizer largely used in East Tennessee last year, it is claimed that it offers to the farmer, for \$12 per ton, chemicals which in the ordinary run of high grade fertilizers would cost him upwards of \$40 per ton. The table shows that it gave very poor results. These practical tests are confirmed by the determinations of the laboratory.

Johnson, the Director of the Connecticut Agricultural Experiment Station, speaks of this compound as follows:

"The last pamed [preparation] is advertised in the cover of the American Agriculturist of January 1882 as follows: 'For \$12 a farmer can buy a formula (520 pounds) of Powell's Prepared Chemicals. This when mixed at home make a ton of Superior Phosphate, equal in plant life and as certain of crop-production as many high-priced phosphates.' A device, resembling a trade mark, bears the word, 'Purity.' 'Quality not quantity.' This is a superphosphate of rather low grade; its cost is \$46.15 per ton and its estimated value \$30.37. 520 pounds of it 'mixed at home' would require the addition of 1,480 pounds of something better than itself to make 'one ton of superior superphosphate.'"[†]

*Page 58, et seq.

[†]Annual Report of the Connecticut Agricultural Experiment Station for 1882, Page 32.

The results produced by the applications of stable manure are very different from those of last year. It will be remembered that in 1881, they actually doubled the crop, and gave results far superior to those afforded by any of the fertilizers. This year they gave yields not inferior to those afforded by many of the fertilizers, but also to that of the best unmanured plat. The difference is to be explained by the fact that last year the soil was poor in vegetable matters, while it was abundantly supplied this year with such matters by the heavy crop of rye turned under green for the preceding crop of corn. Hence, this year the stable manure was only valuable by reason of its salts.

The results these tests correspond on the whole with those of last year and the year before, and are unfavorable to commercial fertilizers, if Johnson's rule is rigorously applied. Even when compared with the average of the unfertilized plats, a calculation of the cost of each application (as made on page 62 of last year's report), shows that the majority were attended with but little, if any, profit.

The results of the tests for the last three years are set forth more fully in Table g.

TABLE G.

EXPERIMENTS OF SECTION VIII FOR 1880, 1881 AND 1882.

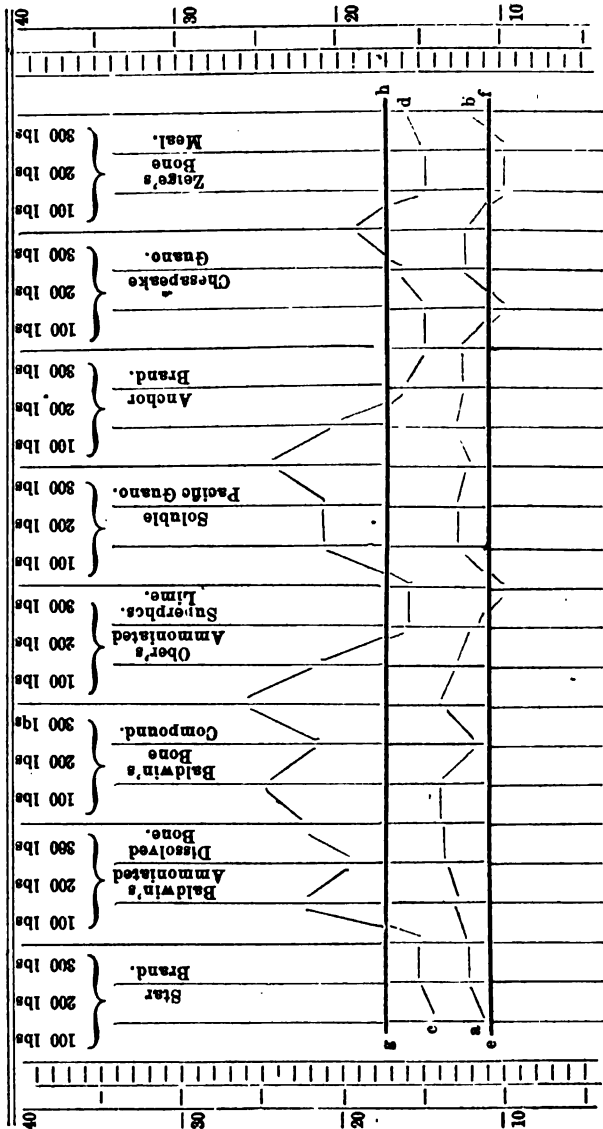
FERTILIZER.	Am't of Fertilizer per Acre. Pounds.	Increase (†) or Loss (-) of Straw, etc., per Acre.				Increase (†) or Loss (-) of Grain per Acre.			
		1880. lbs.	1881. lbs.	1882. lbs.	Av. lbs.	1880. lbs.	1881. bus'ls	1882. bus'ls	Avg. bus'ls
Star Brand.....	100		-648	†43	-302		†0.14	†1.16	†0.65
Same	200		-456	-85	-270		†0.94	-0.67	†0.80
Same	300		-248	-245	-246		†1.74	†0.67	†1.20
Baldwin's Ammoniated Dissolved Bone.....	100	†272	†603		†437	†1.40	†5.96		†3.68
Same.....	200	†352	†27		†189	†3.50	†4.89		†4.19
Same.....	300	†800	†123		†461	†4.30	†5.96		†5.13
Baldwin's Bone Compound.....	100	†576	†200	-1083	†619	†3.40	†6.00	†6.50	†5.30
Same.....	200	†544	-40	†507	†337	†1.90	†4.67	†3.29	†3.28
Same.....	300	†560	†584	†923	†689	†2.70	†7.60	†3.83	†4.71
Ober's Ammoniated Superphos. of Lime	100	†400	-56	†475	†273	†2.20	†2.27	†3.29	†2.58
Same.....	200	†432	-552	-133	-84	†1.40	†1.20	†0.09	†0.89
Same.....	300	†256	-40	-501	-95	†2.20	†2.00	-4.44	-0.08
Soluble Pacific Guano.....	100	†256	-200	†715	†257	†4.80	-2.00	†5.96	†2.92
Same.....	200	†256	†472	†107	†278	†1.40	†4.14	†2.76	†2.76
Same.....	300	†480	†936	†91	†502	†1.60	†3.07	†0.36	†1.67
Anchor Brand.....	100	†80	†43	†475	†199	†0.80	†1.96	†5.96	†2.90
Same.....	200	†160	†11	-213	-14	†0.80	†1.16	-0.71	†0.41
Same.....	300	†96	-373	†171	-35	†1.10	†0.09	†7.03	†2.74
Chesap'ke Guano	100		†7	-437	-143	†0.80	†1.16	-4.17	-0.73
Same.....	200	†80	-373	†75	-72	†0.30	†0.89	†3.29	†1.49
Same.....	300	†320	†363	-181	†167	†2.20	†4.62	-0.45	†2.12
Zeige's Bone Meal	100		-472		-236	-0.50	-1.46		-0.98
Same.....	200	†110	-696		-293	†0.20	-1.75		-0.97
Same.....	300		-136		-68		†0.67		†0.33

In order to facilitate the comparison of the several tests the separate yields are not given, but only the gain or loss afforded by each application for each year as compared with the average yield of the unfertilized plats of that year. The gain is represented by the sign (†) and the loss by (-). Three fertilizers were tested for two years only: the Star Brand in 1881 and 1882, and Baldwin's Ammoniated Dissolved Bone and Zeige's Bone Meal in 1880 and 1881. Applications of 100lbs. and 200lbs. of Star Brand gave only a very slight increase, 300lbs., one of a little upwards of a bushel per acre. Zeige's Bone Meal gave practically no increase; in five out of six applications it proved worthless. Baldwin's Ammoniated Dissolved

Bone is the only fertilizer that shows an increase of grain for the additional amounts used ; 100lbs. gave an increase of 3.68 bushels per acre, 200lbs. one of 4.19 bushels and 300lbs. one of 5.13 bushels. The other fertilizers were tested three years. Baldwin's Bone compound gave the best average results, and yet, 100lbs. gave a larger increase than 200lbs. or 300lbs. This last remark is also true of the Ober, the Soluble Pacific and the Anchor Brand. In the Ober, 100lbs. increased the average by about $2\frac{1}{2}$ bushels, but 200lbs. and 300lbs. show no gain whatever. In the Soluble Pacific all three applications gave very nearly the same average, a gain of about two bushels per acre. In the Anchor Brand 100lbs. and 300lbs. gave very nearly the same gain, three bushels per acre ; 200lbs. a very slight increase. In the Chesapeake Guano 100lbs. gave a smaller average than the unfertilized plats ; 200lbs. and 300lbs. a gain of about two bushels per acre.

These points are brought out more clearly by the diagram of Table *g*.

TABLE g.
GRAPHIC REPRESENTATION OF AVERAGES OF TABLE g.



Scale as in Table a.

a b represents yield of grain.

c d " " " straw, etc.

e f represents average yield of grain of unfertilized plots.

g h " " " straw, etc., of unfertilized plots.

It is apparent that the line representing the average yield of grain for the different applications is generally but little higher than one representing the average of the unfertilized plats, and also, that in not a few cases it is lower for 200 lbs. and 300lbs. of some of the fertilizers than for 100lbs. The same remarks apply to the lines representing the yield of straw. The varying ratio of straw to grain for the different applications are also clearly shown.

It is safe to conclude that the results of these tests, continued for three years, are far from favorable to the majority, if not to all, the fertilizers experimented with.

SECTION VIII.

Experiments Testing Simple Manures.

This Section comprises experiments with barn-yard manure, lime, ashes, plaster, salt, and other simple fertilizers. The position of the several plats is shown in the prefixed plan. The plats of this and the preceding Section were alike in soil, aspect, condition, history, etc., and what has been said of the latter applies equally well to the former. Four unmanured plats were included in this Section, LXXVII, LXXXIV, LXXXVII and XCVII. Between the yield of grain of the best and the worst one there was a difference about four bushels per acre. The average yield of the four plats was 15.53 bushels of grain and 2028lbs. of straw. The two neighboring plats LXXXIV and XCVII gave very nearly the same yield of grain (15.47 bushels and 15.20 bushels). The details and results of the experiments are given in Table VIII.

TABLE VIII.

EXPERIMENTS TESTING SIMPLE MANURES.

Plats 1-16 Acre each. Drilled October 29th. 4 pecks Boughton per Acre.

No. of Plat.	MANURE.	Am't of Manure per Acre.	Yield per plat		Yield per acre.		Lbs. straw, to 1 lb grain.
			Straw, &c. lbs.	Grain. lbs.	Straw, &c. lbs.	Grain. bus.	
lxxiv	Clotworthy's Ground Limestone..... }	400 lbs.	146	52	2,336	13.86	2.80
lxxv	Same.....	600 lbs.	138	57	2,208	15.20	2.42
lxxvi	Same.....	800 lbs.	165	67	2,640	17.86	2.46
lxxvii	Unfertilized.....	.....	125	51	2,000	13.60	2.45
lxxviii	Plaster.....	100 lbs.	148	62	2,368	16.53	2.39
lxxix	Same.....	200 lbs.	96	49	1,536	13.06	1.96
lxxx	Salt.....	8 bus.	205	85	3,280	22.66	2.41
lxxxi	Lime.....	80 bus.	113	62	1,808	16.53	1.82
lxxxii	Ashes.....	80 bus.	95	70	1,520	18.67	1.35
lxxxiii	{ Plaster.....	100 lbs.	90	62	1,440	16.53	1.45
	{ Ashes.....	40 bus.					
	{ Salt.....	8 bus.					
lxxxiv	Unfertilized.....	.....	134	58	2,144	15.47	2.31
lxxxv	Bran.....	300 lbs.	110	45	1,760	12.00	2.44
lxxxvi	{ Clotworthy's Bone	200 lbs.	207	103	3,312	27.46	2.00
	{ Meal.....						
	{ Salt.....						
lxxxvii	Unfertilized.....	.....	185	67	2,160	17.86	2.01
lxxxviii	{ Clotworthy's Bone	200 lbs.	178	92	2,848	24.53	1.93
	{ Meal.....						
	{ Salt.....						
	{ Ashes.....						
lxxxix	Rotted Barn-yard Ma- nure..... }	16 tons.	128	72	2,048	19.20	1.77
cxviii	Green Barn-yard Ma- nure..... }	16 tons.	128	69	2,048	18.40	1.85
xci	{ Bran.....	300 lbs.	127	75	2,032	20.00	1.69
	{ Salt.....						
xcvi	Clotworthy's Bone	200 lbs.	164	81	2,624	21.60	2.03
xcvii	Unfertilized.....	.....	113	37	1,808	15.20	1.98

Average of 4 unfertilized plats, 2,028 lbs., 15.53 bushels per acre.

An examination of the results shows first, that the applications of ground limestone on LXXIV, LXXV and LXXVI were of no benefit to the crop of grain. 400lbs. and 600lbs. both gave yields of grain inferior to the average of the unfertilized plats, and 800lbs. the same yield as that of the best unfertilized one. All three applications, however, slightly increased the crops of straw.

Applications of 100lbs. and 200lbs. of plaster gave no increase

in the crop of grain. The manurial values of ground limestone and plaster were very fully discussed in last year's report.

A dressing of 8 bushels of salt on LXXX increased the crop of grain by about 7 bushels per acre as compared with the average of the unfertilized plats, and by very nearly 5 bushels compared with the yield of the best unmanured one. After every allowance is made for the varying fertility of the different plats, there is yet reason to believe that the salt was of material benefit this year, to the crops of grain and straw, for in every other case where it was used, except one, it added largely to the yield. 100lbs. of plaster on LXXXVIII gave 16.53 bushels of grain per acre, the same amount of plaster, 40 bushels of ashes and 8 bushels of salt (the dressing used on LXXX) gave exactly the same yield, 16.53 bushels, a crop but little better than the average yield of the unfertilized plats and inferior to that of the best unmanured one. It will be remembered that in the one of the experiments of last year, the salt in combination with other fertilizers did not give as good results as when used alone. (See explanation, page 66 *et seq.*, report of 1881). On comparing, however, the yields of LXXXV and XCI, we see that while 300lbs. of bran on the former gave only 12 bushels per acre, the addition of 8 bushels of salt raised the crop of the latter to 20.00 bushels; an increase of 5 bushels as compared with the crop of the adjoining unfertilized plat, XCVII, or the average of all the unmanured plats, and an increase of upwards of 2 bushels as compared with the yield of the best unfertilized one.

Again 200lbs. of bone meal on plat XCVI gave 21.60 bushels, a marked increase as compared with the yield of the unfertilized plats. The addition of 8 bushels of salt to this meal in LXXXVI still further increased the yield by about 6 bushels per acre. This plat gave the best yield of any of the section. As compared with the average of the unfertilized plats it shows an increase of about 12 bushels per acre, and of about 10 bushels as compared with LXXXVII (the best unmanured one). The addition of 40 bushels of ashes to this mixture on LXXXVIII, shows a considerable decrease as compared with the yield of LXXXVI, but a very decided increase as compared with the yields of the unfertilized plats. A careful consideration of these results justifies the conclusion that applications of salt were of considerable benefit to the crop. This conclusion, as will appear further on, is supported by the experience of last

year and also by the results of experiments in this and other countries. In many parts of the north-west a dressing of salt adds largely to the crop of grain. But, as remarked in last year's report, the results of numerous experiments conducted in widely different localities are unsatisfactory and conflicting. Lawes declares that at Rothamsted applications of salt were productive of more harm than good. In opposition to this opinion, advanced in a paper read before the Royal Agricultural Society, Mr. Hooker states that 400lbs. of salt sowed on a portion of his field produced 30 bushels of excellent wheat per acre, while the rest of the field, undressed, gave only 20 bushels of wheat of inferior quality.

Salt has been used as a manure from the earliest ages, and there can be no question that on some soils in different regions its application is, under certain conditions, attended with highly beneficial results. Writers, from Cato down, testify to this fact. Worlidge, 200 years ago, mentions the following instance of its beneficial action: "There is also a relation of one that sowed a bushel of salt long before on a small patch of barren ground at Clapham, which to that day remained more fresh and green, and full of swarth, than all the rest of the field about it; this, though not a beneficial experiment, by reason of the price of salt, yet a plain demonstration of the fertility that is in salts, and gives us encouragement to make use of the brines of salt-pits, or such-like, now in large esteem."* Further reference will be made to this subject in a subsequent Section.

Eighty bushels of lime on LXXXI, and the same quantity of ashes on LXXXII failed to benefit the crop to any appreciable extent. A large amount of vegetable matter was turned under for the preceding crop of grain, but it is probable that the highly calcareous soil had already broken it down and prepared it for the use of the wheat plant.

The ashes, whenever used in combination with salt seem to have interfered to some extent, with its action, for a heavy application of salt, ashes and plaster on LXXXIII gave no increase in the yield of grain or straw. (See also plat LXXXVIII).

Three hundred pounds of bran on LXXXV showed no beneficial effects. The addition of 8 bushels of salt to this amount of bran

*Mystery of Husbandry. London, 1681. Page 83.

(on **xcI**) increased the yield of grain by about 4 bushels per acre. (See page 67 of Report of 1881).

The bone and salt used on the next plat, **LXXXVI**, gave, as before remarked, the best results of any application of the Section. The experiment was intended to test the effects of salt upon the bone phosphate of lime. It is claimed for it that it has the power of dissolving and furnishing to the plant the insoluble phosphoric acid of the soil. On comparing the yield of this plat, 27.46 bushels per acre, with that of **xcvi**, on which the same amount of bone meal was used alone, it is seen that the addition of 8 bushels of salt increased the crop of grain by about 6 bushels per acre and the straw by about 700lbs. It will also be noticed that the second best plat was the one on which the bone meal and salt were used in combination with ashes, the third best, the one on which salt was used alone, and the fourth, the one on which the bone meal was used alone.

Sixteen tons of barn-yard manure ploughed under on plats **LXXXIX** and **CXVIII** slightly increased the yield of grain, the rotted manure by about 4 bushels per acre, the green by about 3 bushels as compared with average of the unfertilized plats. As remarked under a preceding head, the results were by no means equal to those of the experiments of last year where similiar applications more than doubled the crop. It will be observed that the yields were greatly inferior to those of several of the plats on which mineral manures were used. There was probably a sufficiency of vegetable matter already in the soil. This year the rotted manure gave somewhat better results than the green; last year it gave rather worse.

The experiments with the bone meal and salt, will be again referred to in subsequent sections.

The majority of the experiments of this section were begun last year. Four of them were, however, continued for three years. Table H, made on the same plan as Table G, gives the means of comparing the effects of the several applications in the different years.

TABLE H.

EXPERIMENTS OF SECTION VIII, FOR 1880, 1881 AND 1882.

MANURE.	Am't of Manure pr Acre.	Increase (†) or Loss (-) of Straw, etc., per Acre.				Increase (†) or Loss (-) of Grain per Acre.			
		1880. lbs.	1881. lbs.	1882. lbs.	Av'rg lbs.	1880. bus.	1881. bus.	1882. bus.	Av'g bus.
Plaster	100 lbs.		†904	†340	†622		†3.67	†1.00	†2.33
Same	200 lbs.		†920	-492	†214		†0.67	-2.47	-0.90
Salt	8 bus.	†136	†1147	†1252	†845	†0.40	†6.22	†7.13	†4.58
Ashes	80 bus.	-88	†907	-508	†103	-0.40	†6.22	†3.14	†2.98
Lime	80 bus.	†504	†115	-220	†133	†1.20	†5.42	†1.00	†2.54
Plaster	100 lbs.								
Ashes	40 bus.		†1016	-588	†214		†5.74	†1.00	†3.37
Salt	8 bus.								
Bran	300 lbs.		†731	-268	†231		†3.82	-3.53	†0.14
Bran	300 lbs.								
Salt	8 bus.		†923	†4	†463		†5.96	†4.47	†5.21
*Bone Meal.....	200 lbs.		†696	†1284	†990		†4.94	†11.93	†8.43
Salt	8 bus.								
*Bone Meal.....	200 lbs.								
Salt	8 bus.		†1080	†820	†950		†10.00	†9.00	†9.50
Ashes	40 bus.								
Rot'd barny'd manure	16 tons.	†952	†1626	†20	†866	†4.40	†13.20	†3.67	†7.09
Green barny'd manure	16 tons.		†2072	†20	†1046		†13.47	†2.87	†8.17

*In 1881 Zeige's, in 1882 Clotworthy's.

Examining, first, the experiments continued for three years, we see that an application of sixteen tons of rotted manure gave the best results, an average increase of 7.09 bushels per acre. In 1880 it increased the crop by 4.40 bushels, in 1881 by 13.20 bushels, and in 1882 by 3.67 bushels. An application of eight bushels of salt gave the next best results; an average increase of 4.58 bushels. In 1880 it gave an increase of only 0.40 bushels, in 1881 one of 6.22 bushels, and in 1882 one of 7.13 bushels. Eighty bushels of ashes gave an average increase of 2.98 bushels, and the same quantity of lime, one of 2.54 bushels.

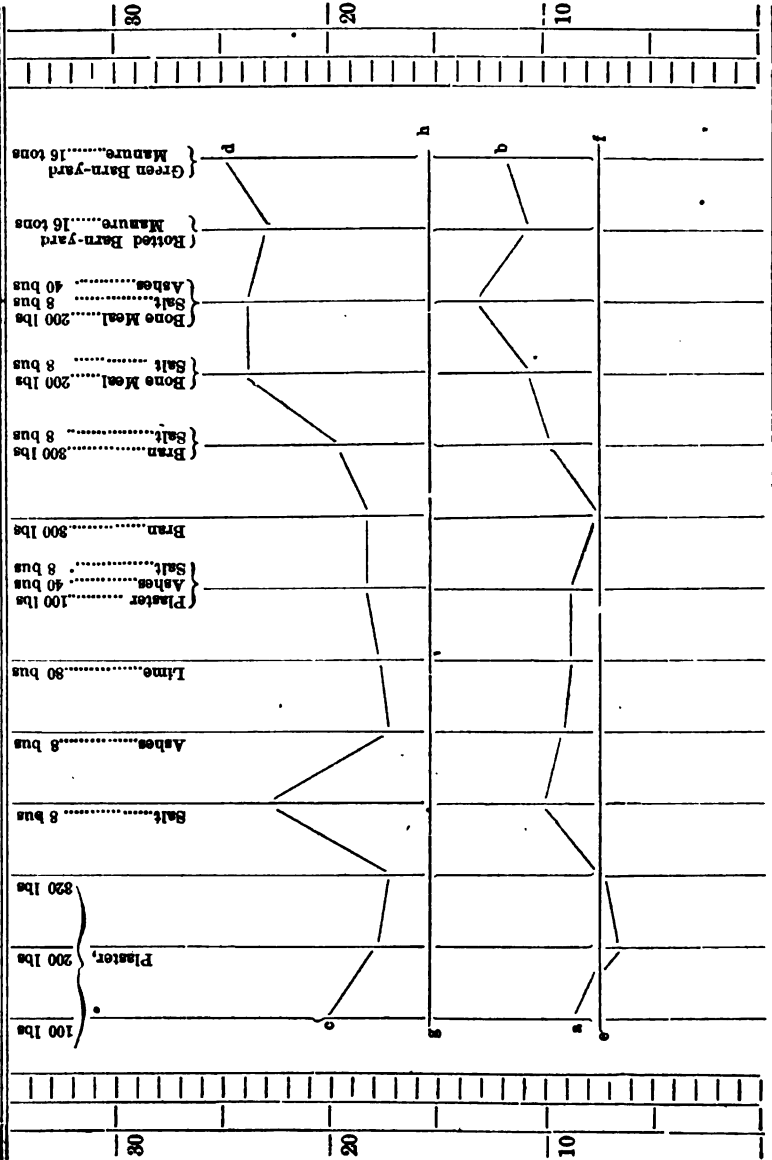
Comparing, next, the experiments for the last two years, we see, first, that a mixture of bone meal, ashes and salt, gave the best results, an average increase of 9.50 bushels per acre (10 bushels in 1881 and 9 bushels in 1882). A mixture of bone meal and salt, and an application of rotted manure, show the next best results, each gave an average increase of 8.43 bushels per acre. The green manure gave almost the same average increase, 8.17 bushels. In

1881 it gave a larger ; in 1882, a smaller increase than the rotted. The salt gave the next best returns ; an average increase of 6.67 bushels ; the bran and salt the next, 5.21 bushels ; the ashes the next, 4.68 bushels ; the plaster, ashes and salt the next, 3.37 bushels ; the lime the next, 3.21 bushels ; one hundred pounds of plaster the next, 2.33 bushels ; the bran the next, 0.14 bushels ; and two hundred pounds of plaster the worst, a decrease of 0.90 bushels per acre.

It will be noticed that several of the applications gave very different results in the different years. In 1881 and 1882 the salt, and the mixture of salt, bone meal and ashes, gave very nearly the same increase each year. Green barnyard manure gave the largest average increase of straw.

The diagram of Table *h* brings out these facts, and makes the comparison of the results easy.

TABLE h.—GRAPHIC REPRESENTATION OF TABLE H.—Letters, etc., as in Table g.



It shows that all the applications increased the average yield of straw. The distance between the two broken horizontal lines represents the varying ratios of straw to grain.

The very satisfactory results afforded by two or three of the applications of mineral manures, more especially of bone meal and salt, alone, or in combination, show that the soil was fairly well supplied with vegetable matter, and that it was probably poor in phosphoric acid. The bone meal and the salt supplied this acid to the crop; the former directly and the latter indirectly.

SECTION IX.

Experiments Testing Chemical Manures.

As the subject of chemical manures was discussed at great length in last year's report, a reference to section IX of that publication will be a sufficient introduction to the following experiments. I will merely recapitulate, for the benefit of my readers, the claims advanced in behalf of these manures by their friends.

It is asserted that they are possessed of high fertilizing value; that they are cheap, as compared with stable manure; that they are portable and always available; that they are of known purity and of easy application; and that they can be readily mixed in such proportion as to meet the requirements of every kind of crop.

Liebig, Ville, Lawes, and others, declare that the results of the numerous experiments and field tests show that their application is attended with greater economy and better results than that of stable manure. Lawes has, however, quite recently observed (*Agricultural Gazette*, London,) "that there is a very general opinion among farmers in England that, while artificial manures act with greater rapidity, they have not the lasting properties of farm-yard manures."

The soil of the plats of this section was similar to that of the plats of the two preceding ones. Its previous treatment was, however, very different. The land, after lying in clover for three years, was thoroughly ploughed in the spring of 1881, and divided up into small plats, on which different experimental crops were planted without manures of any kind. These crops, in consequence of the drought, were failures, and the land was suffered to grow up in crab

grass, which was cut for hay in the fall of that year. The piece was then broken up and seeded with wheat. The plats of this, and the two preceding sections were all prepared in the same way, and seeded the same day with the same variety of wheat. The wheat was put in with the drill.

The details of the experiments and their results are given in Table IX.

1

TABLE IX.

EXPERIMENTS TESTING CHEMICAL FERTILIZERS.

Plats 1-16 acre each. Drilled Oct. 29. 4 pecks Boughton per acre.

No. of Plat.	Yield per Plat.	Lbs. of Fertilizer per Acre.	Yield per Plat.		Yield per Acre		Lbs Straw, etc., to 1 lb. of Grain.
			Straw, &c. lbs.	Grain, lbs.	Straw, etc., lbs.	Grain. Bus.	
cxxviii	Bone Meal.....	200 lbs }	107	45	1,712	12.00	2.38
	Salt	8 bus }					
cxxix	Dissolved So. Ca. } Phosphate..... }	200 lbs.	75	35	1,200	9.33	2.14
cxxx	Plaster.....	200 lbs.	76	24	1,216	6.40	3.17
cxxxi	Sulphate of Mag'sia	200 lbs.	72	28	1,152	7.46	2.57
cxxxii	Sulphate of Potash..	200 lbs.	98	32	1,568	8.54	3.06
cxxxiii	Unfertilized	000 lbs.	53	22	848	5.86	2.40
cxxxiv	Muriate of Potash...	200 lbs.	82	28	1,312	7.46	2.92
cxxxv	Nitrate of Potash....	312 lbs.	84	28	1,344	7.46	3.00
cxxxvi	Nitrate of Potash....	272 lbs.	131	44	2,096	11.73	2.97
cxxxvii	Nitrate of soda.....	272 lbs.	80	32	1,280	8.53	2.50
cxxxviii	Sulphate Ammonia.	200 lbs.	112	43	1,792	11.46	2.60
cxxxix	Rotted Manure (work'd in before seeding)	tons.	66	39	1,056	10.40	1.69
cxl	Sulphate of Potash..	200 lbs }	68	22	1,088	5.86	3.09
	Plaster.....	200 lbs }					
cxli	Sulphate of Potash..	200 lbs }	52	23	832	6.12	2.26
	Dis. So. Ca. Phos....	200 lbs }					
cxlii	Sulphate of Potash..	200 lbs }	70	32	1,120	8.54	2.19
	Disslv. So. Ca. Phos.	200 " }					
	Plaster	200 " }	95	50	1,520	13.33	1.90
cxliii	Sulphate Potash	200 lbs }					
	Dis. So. Ca. Phos....	200 " }	78	42	1,248	11.20	1.85
cxliv	Plaster	200 " }					
	Nitrate of Soda.....	272 " }	51	24	816	6.40	2.12
cxlv	Muriate of Potash....	200 lbs }					
	Plaster.....	200 lbs }	47	25	752	6.66	1.88
cxlvi	Unfertilized.....	000					
cxlvii	Sulphate Magnesia.	200 lbs }	37	23	592	6.14	1.60
	Plaster.....	200 lbs }					
cxlviii	Sulphate of Potash..	200 lbs }	102	43	1,632	11.46	2.37
	Nitratesoda[spring]	272 lbs.					
cxlix	Green Manure spread as top- dress'g Mar. 1882 }	16 tons.	48	32	768	8.53	1.50
cl	Rotted Manure, spread as top- dress'g Mar. 1882 }	16 tons.	78	37	1,248	9.86	2.10
cli	Unfertilized.....	000	36	14	576	3.73	2.57

Average of 3 unfertilized Plats 725lbs, 5.41 bushels per Acre.

Experiments CXXVIII and CXXIX were intended to test the comparative values of bone phosphate and the so-called acid phosphate of lime. Will the undissolved or the dissolved phosphate give the best paying results? This is by no means a new question, as some would have us believe, yet it is one of very great interest, and its importance is becoming more clearly recognized every year. At the risk of some repetition I must offer, for the benefit of non-scientific readers, a few words of explanation in regard to some of the compounds of phosphoric acid (hydrated) and lime.

In agriculture we have only to deal with three of these compounds of phosphates. First, we have the lime or tricalcic (three-lime) phosphate, containing one part of phosphoric acid and three parts of lime. The water is left out for the sake of greater simplicity and clearness. This salt is held to be insoluble in water and dilute acids. It is, however, dissolved by strong acids and by the solutions of certain salts. It is the principal ingredient of animal bone and also of the phosphatic rocks of South Carolina. Next, we have the neutral or dicalcic (two-lime phosphate, containing one part of phosphoric acid and two parts of lime, which is sparingly soluble in water, but is readily dissolved by weak acids. And, lastly, we have the acid or monocalcic (one-lime) phosphate, containing one part of phosphoric acid and one part of lime, freely soluble in water and very weak acids.

The solubility of the salt appears, therefore, to be directly dependent upon the quantity of lime present in proportion to the acid; the less lime the greater the solubility of the phosphate. Liebig, knowing this fact, and observing that the fertilizing effects of bones were increased by the action of the soil, first conceived the idea of increasing the solubility of the phosphoric acid of the bone phosphate of lime by depriving it of some of its lime by the action of an acid stronger than itself. For this purpose he used sulphuric acid. This acid when thoroughly mixed with the finely ground bone phosphate unites, theoretically, with two parts of the lime, forming sulphate of lime or gypsum (plaster). The phosphoric acid and the remaining one part of lime form the acid phosphate of lime. This is the theory of the manufacture of superphosphate, or the so-called acid phosphate of lime. If every part of the sulphuric acid could be brought into contact with two-thirds of the lime of the bone phosphate, and if the resultant gypsum or plaster could

be removed from the monocalcic salt the product would be rightly called acid phosphate. But, in the first place, it is practically impossible to bring the sulphuric acid into such intimate contact with all the ground bones as to induce chemical action between them, and, hence, some of the bone phosphate remains unchanged, and some loses only one part of lime and is converted into the dicalcic phosphate. In the manufactured article the three phosphates of lime are, therefore, usually present. If the process, however, has been carefully conducted the acid phosphate should largely predominate. The sulphate of lime, formed by the union of two parts of lime with the sulphuric acid employed in the process, is also left in the product. Hence, the superphosphate of lime is a commercial mixture of the three phosphates of lime, and the sulphate, with sometimes small percentages of carbonate of lime, iron, etc. A ton so skillfully manufactured from pure ground bone as to have all its phosphoric acid soluble would contain about 468lbs. of acid phosphate and 616lbs. of plaster.

A ton of superphosphate made from the South Carolina phosphates contains about 340lbs. of phosphoric acid, equivalent to about 750lbs. of phosphate of lime.

Soon after the period of its first introduction it was discovered that the superphosphate, when applied as a fertilizer, was precipitated or "reduced" by the action of the soil and rendered less soluble. In any soil containing lime, and nearly every soil has at least a small percentage of lime, the lime enters into combination with the acid (mono-calcic) phosphate and reduces it to the di-calcic or "reverted" form. In sandy soils, however, the acid phosphate, being readily soluble, is soon carried off by the rains; hence, on such soils its application is not economical. It is now generally taught that the acid phosphate is first dissolved and diffused through the soil by water and then precipitated in the form of a very finely divided powder. In this "reduced" state it is slowly but readily dissolved by the acid and saline solutions of the soil, and supplied to the plant in quantities sufficient to cause a healthy and vigorous growth. Some hold that the solution of the superphosphate is too acid to enter into the circulation of the plant, and that the growth induced by it is unhealthy. They say that the beneficial effects of ground bones are due in large part to the action of the soil itself. When incorporated with the soil they are brought into contact with water

charged with carbonic acid. This acid unites with one part of the lime of the bone, forming carbonate of lime, and the rest of the bone phosphate is changed into di-calcic or two-lime salt. They insist that it is not until it is reduced to the same condition by the action of the soil that the so-called acid phosphate produces similar good effects. They also allege that the superphosphate is "over-manufactured"; that too much acid is used; and that the di-calcic or reverted phosphate is the more valuable of the two.

When the superphosphate was first introduced, many farmers, especially those of the sandstone counties of England, protested against its employment, and continued to use finely ground bones. The manufacturer knows, to his cost, that a superphosphate allowed to remain in bulk for several months, suffers a change. A reaction between its constituent parts takes place, and the mono-calcic or acid phosphate, acquiring more lime at the expense of the sulphate, is reduced to the di-calcic or "reverted" form. It is then said to be a "reduced superphosphate."

In the commercial valuation of fertilizers as required by law in several countries, three forms of phosphoric acid were taken account of in the analysis; soluble, reverted and insoluble. A much higher valuation was fixed upon the first of these than upon either of the other two. At some fertilizer control stations the soluble acid was valued at $12\frac{1}{2}$ cents per pound, the reverted, at 9 cents, and the insoluble at from 4 to 6 cents. In other States the reverted was valued at the same price as the soluble. In countries where the former valuation prevailed the manufacturer, of course, lost heavily by the "reduction" of his surplus stock of superphosphates, for he was compelled to sell it at cheaper rates. The farmers, on the other hand, buying these reduced superphosphates, soon discovered that they seemed not only a cheaper, but a better article; one which gave them larger crops and produced more lasting results. To prevent this reduction and consequent loss, the manufacturer now makes use of an excess of acid (sulphuric), to the great injury, so it is asserted, of his goods. For the over-manufactured superphosphate necessarily contains large quantities of water and sulphuric acid, both comparatively worthless as fertilizers.

When the farmers of Norfolk and other English counties could no longer buy the reduced superphosphates in the open market, they proceeded to manufacture them. Purchasing a high grade super-

phosphate, they reduced it by mixing it with pure ground bone. Their practice was, and is, to mix one ton of bone meal with two tons of superphosphate, first moistening the bones and then thoroughly mixing them with the superphosphate. After several weeks the superphosphate was completely reduced and the mixture ready for use.

Now, in view of facts such as these, the question is asked, and with more and more force every year, why continue to use the manufactured article? When a ton of ground phosphate can be bought, say, at \$12, why pay \$18 for the same article manufactured into a superphosphate? Why pay such a difference for ingredients of comparatively little agricultural value; for the gypsum and the water? The answer made to such objections is the following, offered by Voelcker several years ago.

The solubility of any substance is dependent upon its state of division, the finer it is divided the more surface it presents to the natural solvents of the soil, and, hence the greater its solubility. Now, no mechanical means yet discovered will reduce bones or phosphatic rocks to as fine a state of division as their treatment with acid and subsequent precipitation will effect. Voelcker emphatically declares: "In this precipitated condition, insoluble phosphate of lime is infinitely more divided, and in consequence greatly more efficacious, than in the finest state in which the raw materials used by makers of superphosphate can be obtained by mechanical means."*

Now even if we grant his first proposition it by no means follows that his second is a necessary consequence. The question is, setting theory aside, "is it greatly more efficacious?" Many farmers declare that it is not. Then, clearly, it is a question which must be experimentally settled; and the experimental stations and agricultural associations of Europe are doing a good work in attacking it. The Aberdeenshire Agricultural Association has for some years conducted a series of experiments which, so far, are decidedly favorable to the undissolved, or tri-calcic phosphate. Similar results have attended the experiments of some of the German investigators. The question is, however, a very difficult one, which demands long continued and patient experimentation; one that cannot be settled in a day.

*Journal of the Royal Agricultural Society. No. xxi. Page 159.

The point has been made, that in some of the experiments bearing upon it, the phosphates selected for the tests were not the best for purpose. In the manufacture of superphosphate the high grade phosphates are preferred; those containing large percentages of carbonate of lime, iron oxide and other impurities are rejected, because these matters use up considerable quantities of sulphuric acid. In the tests, it is the practice to use these high-grade phosphates in the dissolved and undissolved state. It is urged that a low grade phosphate would be better for the "undissolved" tests; one containing appreciable amounts of the two ingredients named above. No matter how finely the phosphate is ground, the carbonate of lime and the oxide of iron being softer, will be reduced to a still finer state of division, and being more readily and rapidly attacked by the solvents of the soil, will be dissolved out first, and their removal will, of course, increase the surface, and hence the solubility, of the phosphate.

It is asserted, therefore, that "some mineral phosphates are better adapted than others for use in an unmanufactured condition."

Since the introduction of "floats" (phosphatic rock reduced to an impalpable powder), an article described in a preceding section of this report, this question has become one of much greater interest and importance for southern farmers, and our agricultural associations and stations should address themselves, patiently and resolutely, to its investigation.

The experiments of this section bear only indirectly upon it, and my reason for discussing it, at such length, is the hope that this discussion will bring it to the notice of those willing and competent to investigate it.

Three plats were left unfertilized, Nos. CXXXIII, CXLVI and CLI. There was but little difference between the yields of the first two. The crop of grain of the third plat (CLI) shows that it was probably the poorest one of the section. The average of the three, 5.41 bushels of grain and 725lbs. of straw per acre, was not materially different from the yield of the unmanured plat, CXXXIII. It may therefore be taken to fairly represent the natural productiveness of the soil. A comparison of this average with those of the unmanured plats of the two preceding sections shows a striking difference in favor of the former. As all the plats of the entire series had the same kind of soil it may be assumed that the bare fallow of

the spring and early summer, followed as it was by a hot and dry summer and rainy winter, injured the land. This subject will be more particularly noticed in a subsequent section.

An application of 200lbs. of dissolved South Carolina phosphate (superphosphate) on plat CXXIX gave 9.33 bushels of grain per acre, an increase as compared with the average of the unmanured plats of about 4 bushels, or of 2.66 bushels as compared with the yield of the best unfertilized one (CXLVI). The crop of straw shows also a large increase. On CXXVIII the same quantity, 200lbs. of bone meal, or tricalcic phosphate, was used, together with 8 bushels of salt. The salt was added for the purpose of more rapidly dissolving the bone phosphate, as explained in a preceding section. This application more than doubled the crop, as compared with the average of the unfertilized plats. It gave 2.66 bushels more of grain and 512lbs. more straw than the dissolved phosphate. The yield of this plat was the next best of any of the section, and almost equal to that of the best one, CXLIII, which received 800lbs. of chemicals per acre. It was better than that of the one dressed with rotted stable manure. In the preceding section the addition of salt to the bone meal was also highly beneficial to the crop. If it really has the action ascribed to it, it is certainly a cheap and easy way of rendering bone meal soluble and active.

In the remaining experiments the tests of last year were repeated.

On some of the plats the several mineral manures were used separately, on others they were combined two by two, and on others still, by threes. It will be better to consider the non-nitrogenous first, and the nitrogenous last.

It will be remembered that Ville and his followers urge the importance of the farmer determining for himself, by means of small experimental plats, the kind of manures required by his soil. In last year's report I endeavored to show the difficult nature of such investigations. On page 73 of that report the reader will find this point very fully discussed and it is unnecessary, therefore, to say anything further upon it here.

In considering, first, the effects of the sulphates, we find that on CXXX 200lbs. of gypsum (hydrated sulphate of lime) gave an increase of about 1.00 bushel as compared with the average of the unfertilized plats, that the same amount of sulphate of magnesia gave, on CXXXI, an increase of about 2.00 bushels, as compared

with the same standard, and the same amount of sulphate of potash on CXXXII gave an increase of about 3 bushels per acre. The crops of straw show much heavier gains. The muriate of potash on plat CXXXIV gave the same yield as the sulphate of magnesia, an increase of about 2 bushels per acre. It will be noticed that the sulphate of potash gave about 1 bushel more than the muriate; last year the muriate gave about 1 bushel more than the sulphate. The muriate costs about $2\frac{1}{2}$ cents per pound, the sulphate $1\frac{1}{2}$ cents.

Examining, next, the plats on which these salts were applied by twos we see that sulphate of potash and plaster on CXL gave a smaller yield than when used alone; there is hardly an appreciable increase as compared with the average of the three unfertilized plats. This falling off must not however be ascribed to the injurious effects of a combination of the two salts but rather to the exceptional poverty of the soil of the plat. The same amount of muriate of potash used with the same amount of "plaster," or gypsum, on CXLV shows an increase over the sulphate and salt of nearly 1 bushel per acre. As compared with the average of the three unmanured plats it gave a gain of a little more than 1 bushel. The sulphate of potash and dissolved South Carolina phosphate on CXLI show a gain of less than 1 bushel as compared with the standard of reference.

Plaster, potash and phosphate on CXLII gave an increase of about 3 bushels per acre. On CXLVII, the combination of the sulphates of lime, magnesia and potash gave a very slight increase (less than 1 bushel).

An examination of the preceding experiments discloses the fact that the several applications of mineral manures were attended with but very slight beneficial results and with no profit whatever, if the cost of each application is considered.

We come, next, to the consideration of the nitrogenous manures.

Whether plants, and more especially leguminous ones, have the power of directly appropriating the free nitrogen of the air, whether the atmosphere furnishes an amount of combined nitrogen sufficient to meet all the demands of the plant, and other questions connected with the subject of nitrogenous manures, were fully discussed in last year's report. These questions are still unsettled. Lawes and Gilbert conclude an elaborate paper entitled, "Determinations of nitrogen in the soils of some of the experimental fields at Rothamsted, and the bearing of the results on the question of the sources of

the nitrogen of our crops," read before the American Association for the Advancement of Science, in August, 1882, and lately republished by the U. S. Department of Agriculture with the following observations: "In fact, after this review of the evidence which the determinations of the nitrogen in the soils of our experimental plots afford, we end as we began, by saying that, although the facts of production are not as yet conclusively explained, we maintain that there is, to say the least, much more of direct experimental proof of the soil than of the atmospheric source of the nitrogen. Moreover, we submit that this may be said not only of the source of the nitrogen of the cereals, but of the root crops and of the Leguminosae."*

As to the effect of nitrogenous manures on different crops and the relative manurial value of different nitrogenous compounds, the following are the conclusions drawn from the now well-known series of experiments of the Aberdeenshire Agricultural Association of Scotland: "Nitrogenous manures used alone, have little effect on root crops, unless the soil is exceptionally poor in nitrogen and rich in available phosphate. Nitrogenous manures used with phosphates on soils in fairly good condition give a visible increase of root crops; but this increase is due mostly, and often entirely, to excess of water in the bulbs. Nitrogenous manures greatly increase cereal crops, and the increase in this case is not due to excess of water. As to the relative efficacy of different forms of nitrogen, the ultimate effect of nitrogen in sulphate of ammonia, in guano, and steamed bone flour is nearly identical, whether used with soluble or insoluble phosphate. Nitrate of soda, when used with soluble phosphate, is also identical with the above forms, but is of less efficacy when used with insoluble phosphate. Fine division, (or perfect disaggregation) of phosphates assist the plant nearly as much, and with more healthy results, than applications of nitrogenous manures."

I do not propose to discuss these questions further in this report. All who have carefully studied them are forced to admit their difficult nature. Their solution is a work which will require great patience and laborious effort, and a rare combination of qualities, to be found only in the agriculturist of the future; a wide range of

*Results of Field Experiments with Various Fertilizers. Washington, 1883. Page 181.

scientific knowledge, sound judgment and thorough familiarity with the practical details of husbandry.

J. M. Schlieden, a contemporary of Liebig's, in commenting upon the views of the latter in regard to mineral manures, remarks: "Whether Liebig has attained to this end [to furnish to the soil or plant a proper compost of those mineral substances which the plant requires and the soil is deficient in] can only be determined after experience has given its evidence. In theory, it must be affirmed that the principle is correct, and the carrying out possible. But vegetable physiology will, with good right, make an objection to this system of manuring, and experience will confirm it. * * * *

"Liebig's chemical one-sidedness, in this respect, will probably be mischievous to those agriculturists who cannot neutralize this fault of their own knowledge of natural science, just as on the other side, the absence of a thorough study of natural science, and crude empirical prejudice, have, in these later times, prevented many, particularly German agriculturists, from taking part in the improvements called forth by the progress of science."*

These predictions have been fully verified. The failures of the past should teach us the necessity of caution in dealing with the problems of plant nutrition and growth.

The results of the experiments of this year, like those of the two preceding years, are somewhat favorable to nitrogenous manures. On comparing, first, the effects of the different compounds of nitrogen used alone, we see that 200lbs. of sulphate of ammonia, (plat CXXXVIII) gave 11.46 bushels per acre, an increase, as compared with the average of the unfertilized plats, of 6.05 bushels; that 272lbs. of nitrate of soda, containing the same amount of nitrogen as the preceding application, gave (on CXXXVII) 8.53 bushels, an increase of 3.12 bushels; and that 312lbs. of nitrate of potash, with the same amount of nitrogen, gave (on CXXXV) 7.46 bushels, an increase of only 2.05 bushels. With the exception of the sulphate of ammonia, these applications gave yields inferior to those afforded by the majority of the non-nitrogenous salts. The applications were made in the fall. Of the three, the ammoniacal salt gave the best results. Plat CXXXVI, on which 272lbs. of nitrate of potash was applied in the fall, is an apparent exception. This plat was of such

*The Plant, a Biography, translated by Arthur Henfry, London, 1843. Page 177, 178.

exceptional fertility that it was our original intention to leave it unfertilized. It hardly admits, therefore, of comparison with the others.

On comparing, next, the fall and spring applications of nitrate of soda, (on plats CXXXVII and CXLVIII) we see that the latter gave 2.93 bushels more per acre than the former, and that its yield is the same as that afforded by the sulphate of ammonia, 11.46 bushels per acre. These results differ widely from those of last year.

Six hundred pounds of mineral fertilizers, on CXLII, gave a yield of 8.54 bushels; the addition of 200lbs. of sulphate of ammonia to these salts, on the adjoining plat CXLIII, gave 13.33 bushels, the best yield of any of the section, and an increase, as compared with the yield of the preceding application, of 4.79 bushels. The substitution of 272lbs. of nitrate of soda for the 200lbs. of sulphate of ammonia in this application gave, on CXLIV, 11.20 bushels, an increase as compared with CXLII of 2.66 bushels, but a decrease of 2.13 bushels as compared with CXLIII. It will be noticed that 272lbs. of nitrate of soda applied in the spring gave better results than the same amount of this salt used in the fall in combination with 600lbs. of mineral fertilizers. It also proved superior to top-dressings of green and rotted manures applied the same day, as will be seen on comparing the yields of CXLVIII, CXLIX and CL.

Sixteen tons of rotted manure ploughed under in the fall on plat CXXXIX gave slightly better results than the same amount spread as a top dressing in the spring on CL. The spring top-dressing of rotted manure proved superior to the same amount of green manure applied in the same way. It should be particularly noticed, in this connection, that several of the salts gave decidedly better returns than the barn-yard manures.

As far as fall applications are concerned the results of the experiments of this year correspond very closely with those of last year and the year before, and fairly establish the superiority of sulphate of ammonia as a fertilizer for wheat. Those of this year would seem to show, however, that spring applications of nitrate of soda are equally as beneficial. The truth of the first part of the statement will appear more fully upon comparing the results of the experiments of the three years.

It should be remarked, however, before dismissing the experi-

ments of this year, that the prices of the chemicals used were the same as those stated in last year's report, and that a simple calculation will show that not one of the applications gave paying results. Table J, constructed as tables G and H, gives the average results of the experiments for the years 1880, 1881 and 1882.

TABLE J.
EXPERIMENTS OF SECTION IX FOR 1880, 1881 and 1882.

FERTILIZER.	Am't of Fertilizer per Acre. Lbs.	Increase (†) or Loss (‡) of Straw, etc., per Acre				Increase (†) or Loss (‡) of Grain per Acre.			
		1880 Lbs.	1881 Lbs.	1882 Lbs.	Av'g Lbs.	1880 Bus.	1881 Bus.	1882 Bus.	Av'ge Bus.
Bone Meal.....	200								
Salt	8 bus. }		696	957	841	4.94	6.59	5.76	
Acid Phosphate of Lime.....	200	388	11	475	291	3.40	2.49	3.92	3.27
Sulphate of Ammonia.....	200	804	472	1067	781	6.00	6.80	6.05	6.28
Nitrate of Potash.....	312	356	536	619	503	1.80	1.74	2.05	1.86
Nitrate of Soda (Fall).....	272	340	200	555	365	2.30	4.67	3.12	3.36
Nitrate of Soda (Spring).....	272		360	907	273		2.00	6.05	2.02
Sulphate of Magnesia.....	200	212	315	427	318	1.80	2.76	2.05	2.20
Sulphate of Potash.....	200	260	507	843	536	3.90	2.22	3.13	3.08
Muriate of Potash.....	200	292	363	587	414	4.20	3.29	2.05	3.18
Plaster.....	200		920	491	705		0.67	0.99	0.83
Sulphate of Potash.....	200								
Plaster.....	200	370	1272	363	668	3.70	0.14	0.45	1.43
Muriate of Potash.....	200								
Plaster.....	200	468	392	91	55	2.80	2.54	0.99	2.11
Acid Phosphate of Lime.....	200		456	107	281		4.40	0.71	2.55
Potash Salts.....	200								
Acid Phosphate of Lime.....	200								
Potash Salts.....	200	268	392	395	173	1.20	1.47	3.13	1.93
Plaster.....	200								
Sulphate of Magnesia.....	200								
Sulphate of Potash.....	200		72	133	102		3.87	0.73	2.30
Plaster.....	200								
Acid Phosphate of Lime.....	200								
Sulphate of Potash.....	200								
Plaster.....	200	500	920	795	738	4.30	7.34	7.92	6.52
Sulphate of Ammonia.....	200								
Acid Phosphate of Lime.....	200								
Sulphate of Potash.....	200								
Plaster.....	200	140	536	523	399	3.60	7.07	5.79	5.48
Nitrate of Soda.....	272								

Five experiments, begun in 1881 and continued in 1882, those namely, with bone meal and salt, with nitrate of soda applied in the spring, with 200lbs. of plaster, with acid phosphate of lime and potash salts, and with sulphates of magnesia, potash and lime, are also included in the Table.

If we compare, first, the tests of the bone phosphate of lime and salt, and the acid phosphate, we find that the former gave an average annual increase of 5.76 bushels per acre, and the latter an average increase (for 1881 and 1882) of 3.20 bushels. In the yield of straw the difference in favor of the first is still greater. In comparing, next, the results of all the experiments for the last two years it appears that the bone meal and salt gave the third best average increase of grain, being inferior only to the sulphate of ammonia used in combination with mineral salts and used alone.

In considering, next, the effects of fall and spring applications of nitrate of soda for 1881 and 1882, we find that the first gave an increase of 3.89 bushels and the second an increase of 2.02 bushels. The plaster shows the smallest increase of any application of the section. The acid phosphate and salts of potash in combination show a smaller increase than when used separately. This remark is also true of the combination of the sulphates of magnesia, potash and lime, with the exception of the gypsum.

Examining, next, the experiments continued for three years, it is evident that the combination of sulphate of ammonia and mineral salts gave the best results, an average annual increase of 6.52 bushels per acre, and that the sulphate of ammonia used alone gave almost as large an increase. The combination of nitrate of soda and mineral salts gave the third best average increase. If the amount and cost of these three applications are considered, it is evident that the sulphate of ammonia gave by far the best results. The acid phosphate of lime gave the fourth largest increase and proved superior both to the spring and the fall applications of nitrate of soda as well as to the nitrate of potash. The mineral salts, used separately or in combination, show slight average gains. The sulphate and the muriate of potash gave almost the same average increase.

The following diagram brings these and other points out very clearly, and renders the comparison of the results afforded by the several applications easier.

TABLE j.—GRAPHIC REPRESENTATION OF TABLE J.—Letters, etc., as in Table g.

	10	20	30
Bone Meal..... 8 bu			
Salt..... 200 lbs			
Acid Phos. of Lime..... 200 lbs			
Sulph. of Ammonia..... 200 lbs			
Nitrate of Potash..... 312 lbs			
Nitrate of Soda..... 272 lbs			
{ Nitrate of Soda..... 272 lbs (In Spring)			
Sulph. of Magnesia..... 200 lbs			
Sulph. of Potash..... 200 lbs			
Muriate of Potash..... 200 lbs			
Gypsum or Plaster..... 200 lbs			
{ Sulph. of Potash..... 200 lbs Plaster..... 200 lbs			
Acid Phos. of Lime..... 200 lbs			
Potash Salts..... 200 lbs			
Plaster..... 200 lbs			
Acid Phos. of Lime..... 200 lbs			
Sulph. of Potash..... 200 lbs			
Plaster..... 200 lbs			
Sulph. of Magnesia..... 200 lbs			
{ Sulph. of Potash..... 200 lbs Plaster..... 200 lbs			
Acid Phos. of Lime..... 200 lbs			
Sulph. of Potash..... 200 lbs			
Plaster..... 200 lbs			
Acid Phos. of Lime..... 200 lbs			
Sulph. of Potash..... 200 lbs			
Plaster..... 200 lbs			
Nitrate of Soda..... 272 lbs			

The want of parallelism between the lines representing the straw and grain will doubtless be observed ; also the high point reached by the straw of the combination of sulphate of potash and plaster. It should be remembered that the straw of the combination of bone meal and salt, and of the plaster used alone, is the average for two years only, (1881 and 1882.)

In summing up the results of the experiments of this section for the last three years we are justified in holding that they are decidedly favorable to applications of salts of ammonia, used singly or in combination with mineral fertilizers, and that they show very clearly that the increase afforded by the chemical manures did not pay for their cost.

SECTION X.

Experiments Testing Barn-yard Manures.

The nature and object of the experiments of this section and the subject of barn-yard manure were treated of so fully in last year's report as to preclude the necessity of further discussion in this year's.

The plats of this section immediately adjoined those of Series I, and their condition, history, &c., are given on page 5. The experiments of last year (as explained in Section X of Report of 1881), were as exactly repeated as possible.

The details and results are set forth in Table X.

TABLE X.

EXPERIMENTS TESTING BARN-YARD MANURES.

Plats 1-16 Acres each. Drilled November 5th. 4 Pecks per Acre. Boughton.

No. of Plat.	KIND OF MANURE AND HOW APPLIED.	Am't of Manure per Acre.	Yield per Plat		Yield pr. Acre		Lbs. of Straw, etc., to 1 lb. of Grain.
			Straw, etc. lbs.	Grain. lbs.	Straw, etc. lbs.	Grain. bus.	
lxiv	Green Manure worked in before Seeding.....	16 tons.	103	82	1,648	21.86	1.25
lxv	Rotted Manure worked in before Seeding.....	16 tons.	70	65	1,120	17.33	1.07
lxvi	Rotted Manure spread as top-dress'g af. Seeding	16 tons.	59	58	944	15.46	1.01
lxvii	Green Manure spread as top-dress'g af. Seeding	16 tons.	25	35	400	9.33	0.71
lxviii	Green Manure.....	16 tons }	63	64	1,008	17.06	0.99
	Salt.....	8 bus. }					
lxix	Worked in before Seeding. Unmanured.....	000	17	33	272	8.80	0.37
xxi	Rotted Manure.....	16 tons }	43	57	688	15.20	0.75
	Salt.....	8 bus. }					
lxxi	Worked in before Seeding. Rotted Manure.....	16 tons }	36	59	576	15.73	0.60
	Salt.....	8 bus. }					
	Clotworthy's Bone Meal	200 lbs }					
	Worked in before Seeding. Green Manure.....	16 tons }					
lxxii	Salt.....	8 bus. }	61	69	976	18.40	0.88
	Clotworthy's Bone Meal	200 lbs }					
lxxiii	Worked in before Seeding. Straw spread thinly as	Thin }	31	39	496	10.40	0.79
	mulch after Seeding...	layer. }					

It will be seen from the *Plan* that the unmanured plat LXIX was almost in the center of the others and bordered upon all except two. It can be fairly assumed therefore, to represent the natural fertility of the soil. The practice of last year was repeated. The green manure was taken directly from well-littered stables, the fermented, from a heap carefully made and compacted. While exposed to the rain it was partially protected by a covering of earth, and was thoroughly rotted and in good condition. Sixteen tons per acre of green manure were carefully spread on plat LXIV and shallowly turned under just before the land was seeded. An equal quantity of the rotted manure was ploughed under in the same way in plat LXV. The green manure gave not only much the larger yield of grain and straw of the two, but the best results of any application of the sec-

tion. Its yield of 21.86 bushels per acre shows an increase as compared with the unmanured plat, LXIX, of 13.06 bushels of grain, and 1,376lbs. of straw, and an increase of 4.53 bushels as compared with the rotted manure, LXV. The latter gave an increase of 8.53 bushels as compared with the yield of the unmanured plat. The application of 16 tons of green manure almost trebled the crop, the same amount of rotted manure more than doubled it. Again, as in last year's experiments, the results are decidedly in favor of the unfermented manure. As to the economy of its application see remarks on page 97 of report of 1881.

On the two next plats, LXVI and LXVII, the manures were spread as top-dressings after the wheat was sown. The manures in kind and quantity were the same as those used on the two preceding plats. The rotted manure spread on LXVI gave an increase, as compared with the unmanured plat, of 6.66 bushels per acre, or 1.87 bushels less than the same amount of the same manure turned under before seeding. The top-dressing of green manure, on LXVII gave only an increase, as compared with the same standard, of 0.53 bushels, or in other words scarcely any increase at all. It will be remembered that last year the same application damaged the crop to an appreciable extent. The preceding experiments show that manures, both green and rotted, gave the best results when ploughed under for wheat.

The following experiments were introduced, as explained in last year's report, to test the alleged efficacy of salt, and especially its solvent powers. Sixteen tons of green manure and 8 bushels of salt per acre on plat LXVIII, ploughed in before the wheat was sown, gave a yield of 17.06 bushels per acre, an increase of 8.26 bushels per acre, or 4.80 bushels less than the same amount of the same manure used alone. The same quantity of rotted manure and salt on the next plat but one, LXX, gave 15.20 bushels per acre, an increase of 6.40 bushels but a decrease of 2.13 bushels as compared with LXV, where the same quantity of the same manure was used alone. From these two tests it appears that the salt produced no beneficial effects. It is worthy of notice that here again, when ploughed under, the green manure maintained its superiority to the rotted. And the same result is observable in the next two experiments where 200lbs. of bone meal per acre were added to the manure and salt. On LXXI the added bone meal shows a gain of only

0.53 bushels as compared with the same manure and salt used on LXX, and a loss of 1.60 bushels as compared with the same manure used alone on LXV. As compared with the unmanured plat it shows, however, a gain of 6.93 bushels. The added bone meal on LXXII gave a gain, as compared with the same manure and salt applied on XLVIII, of 1.36 bushels and a loss of 3.46 bushels, as compared with the same manure used alone in LXIV. It appears, therefore, that while the bone meal apparently increased to a small extent the efficacy of the manures and salt, neither it nor the salt added anything to the effects of the manures.

A thin mulching of straw, spread over LXXIII, gave an increase of 1.60 bushels per acre. In summing up the results for this year it is evident that both green and rotted manures, ploughed under, were of great benefit to the wheat crop; that the former were throughout decidedly better than the latter; that when ploughed under, green manure gave much better results than when used as a top-dressing and rotted manure slightly better, and that salt and bone added nothing to the manurial value of the compost. Mulching was of but little benefit to the crop.

The experiments of this year and last, as will be found on comparing the two sets, were remarkably alike in their results, and the conclusions drawn from those of 1881 are in the main supported by the conclusions deducible from those of 1882. The results and averages for the two years are given in Table K, constructed on the same plan as Table G.

TABLE K.

EXPERIMENTS OF SECTION X FOR 1880, 1881 AND 1882.

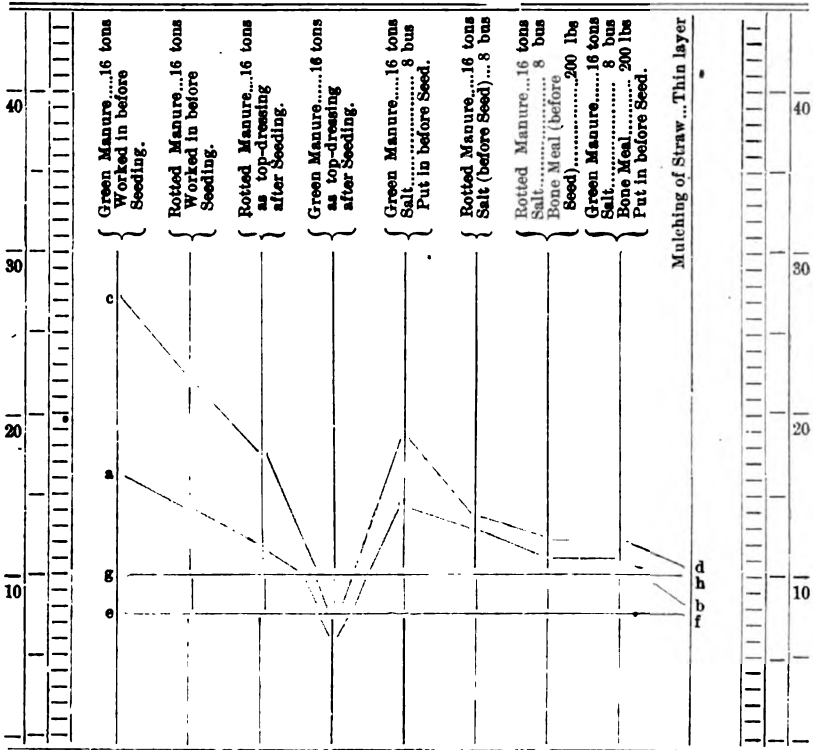
MANURE.	Am't of Manure per Acre.	Increase (±) or loss (—) of Straw, etc., per Acre.				Increase (±) or Loss (—) of Grain per Acre.			
		1880 lbs.	1881 lbs.	1882 lbs.	Avr'ge lbs.	1880 bus.	1881 bus.	1882 bus.	Avr'ge bus.
Green Manure } worked in be- fore Seeding... }	16 tons.	—	±2,072	±1,376	±1,724	—	±13.47	±13.06	±13.26
Rotted Manure } worked in be- fore Seeding... }	16 tons.	—	±1,626	± 848	±1,232	—	±13.20	± 8.53	±10.86
Rotted Manure } spread as top- dressing after Seeding	16 tons.	—	± 904	± 672	± 788	—	± 6.27	± 6.66	± 6.46
Green Manure } spread as top- dressing after Seeding	16 tons.	—	—472	± 128	—172	—	—1.46	± 0.53	—0.46
Green Manure.....	16 tons.	—	±1,016	± 786	± 876	—	±13.74	± 8.26	±11.00
Salt.....	8 bus.	—	±1,016	± 786	± 876	—	±13.74	± 8.26	±11.00
worked in before Seeding									
Rotted Manure.....	16 tons.	—	± 408	± 416	± 412	—	±10.54	± 6.40	± 8.47
Salt.....	8 bus.	—	± 408	± 416	± 412	—	±10.54	± 6.40	± 8.47
Worked in before Seeding									
Rotted Manure.....	16 tons.	—	± 472	± 304	± 388	—	± 6.80	± 6.93	± 6.86
Salt.....	8 bus.	—	± 472	± 304	± 388	—	± 6.80	± 6.93	± 6.86
Bone Meal.....	200 lbs.	—	± 472	± 304	± 388	—	± 6.80	± 6.93	± 6.86
Worked in before Seeding									
Green Manure.....	16 tons.	—	± 88	± 704	± 396	—	± 5.20	± 9.60	± 7.40
Salt.....	8 bus.	—	± 88	± 704	± 396	—	± 5.20	± 9.60	± 7.40
Bone Meal.....	200 lbs.	—	± 88	± 704	± 396	—	± 5.20	± 9.60	± 7.40
Worked in before Seeding.....									
Mulch of Straw } or Chaff..... }	Thin } layer }	—	—56	± 224	± 84	—	—1.46	± 1.60	± 0.07

It will be noticed that sixteen tons of green manure ploughed under gave very nearly the same increase each year, 1881, 13.47 bushels, and in 1882, 13.06 bushels, the average of the two being 13.26 bushels, the largest of the section. The correspondence in the case of the rotted manure, similarly treated, was not as marked. In 1881 the increase was 13.20 bushels—almost the same as that afforded by the green manure—in 1882 it was only 8.53 bushels. Its average was the third best of the section. Again, sixteen tons

of rotted manure spread over the wheat as a top-dressing gave almost the same increase each year ; in 1881, 6.27 bushels and in 1882, 6.66 bushels, the average being 6.46 bushels. Each year it proved inferior to the same quantity of the same manure ploughed under. The top-dressing of green manure damaged the crop in 1881, and was of but little benefit to it in 1882. The average of the two years shows a loss of nearly a half bushel of grain per acre. The green manure and salt ploughed under gave slightly the best results, in 1881, an increase of 13.74 bushels per acre, and in 1882, 8.26 bushels, the third best. Its average is the second best of the section. In its results each year, and of course in its average, the salt was of no benefit to the crop. And the same is true of the mixture of rotted manure and salt ; each year it gave a smaller increase than the rotted manure used alone. The bone meal, salt and rotted manure gave very nearly the same increase each year: 6.80 bushels in 1881 and 6.93 bushels in 1882. In 1881 the addition of the bone meal to the salt and manure was without benefit to the crop ; in 1882 it gave a slight increase, but the average results for the two years were inferior to those of the salt and manure. The bone meal added to the green manure and salt gave the smallest increase of any of the manures or composts ploughed under ; its addition, in fact, appeared to injure the crop. In 1882, however, it gave the second largest increase. Its average was inferior to that of the mixture of the same manure and salt. In 1881 the mulching injured the crop ; in 1882 it slightly improved it. The average shows no benefit from its use. These facts and others are brought out very plainly by Diagram *k*.

TABLE k.

GRAPHIC REPRESENTATION OF TABLE K.



Letters, etc., as in Table g.

It is seen at a glance that the green manure, ploughed under, gave the largest average of both grain and straw, that the rotted manure, similarly treated, gave the next largest of straw and third of grain, that the lines representing the straw and grain nearly touched each other where the green manure was spread as a top-dressing, and were closely parallel throughout the rest of the experiments. It shows also that the green manure spread as a top-dressing, gave a yield inferior to that of the average of the unfertilized plats, and the mulching one but little, if anything, better.

The average results for the two years, like those of each separate year, are strongly in favor, of first, the ploughing under of manures both green and fermented, composted and uncomposted, or wheat;

second, in favor of the employment of green rather than rotted manure for this purpose ; third, against composting either kind with salt or bone meal, or both ; and lastly, against the practice of top-dressing with green manure or mulching with straw.

Although the foregoing experiments have given strikingly uniform results for the two years ; they are by no means extensive enough nor sufficiently long continued to settle the important questions upon which they bear. They are certainly, however, possessed of sufficient interest to justify their continuation. In this connection the remarks of Dr. Voelker upon the results of 1881 of the Woburn experiments, conducted on behalf of the Royal Agricultural Society of England, are directly to the point. Commenting upon the comparative effects of the nitrates and ammoniacal salts he remarks :

"In every instance the application of nitrate of soda in 1881 had a better result than the corresponding experiments with ammonia-salts. The opposite was the case in the preceding year, when salts of ammonia, either applied alone, or in conjunction with mineral manures, in every instance gave a better yield of wheat than the corresponding experiments in which the salts of ammonia were replaced by nitrate of soda."

"We have here striking examples presented to us of the danger of drawing general conclusions from the harvest results of a single season [and he might well add, of even two or three seasons]. Notwithstanding the numerous experiments which have been made by many experimenters in which nitrate of soda and ammonia-salts have been applied to the wheat crop, we have yet to learn the precise conditions under which either nitrate of soda or salts of ammonia produce the larger wheat crop."*

In regard to the effects of barn-yard manures used alongside of the mineral fertilizers in these Woburn experiments he observes :

"Farm-yard manure, even when used in the moderate quantity of 4 tons per acre, had a very good effect on the permanent wheat in 1881.

"On plot 10, manured with 4 tons of good dung, the produce amounted to 33.2 bushels, weighing 60lbs. per bushel, and 24 cwt. 3 qrs. and 13lbs. of straw ; whereas in 1880 the produce of this

*Journal Royal Agricultural Society. No. xxxv. Part I. Page 306.

plot amounted to only 15.1 bushels, weighing 50½ lbs. per bushel, and 19 cwts. 2 qrs. and 3 lbs. of straw."

"Double the quantity, that is 8 tons of farm-yard manure per acre on plot 11, produced 41.2 bushels, weighing 60 lbs. per bushel, and 1 ton 12 cwts. and 8 lbs. of straw; the yield on the same plot in the preceding year having been only 19½ bushels, weighing only 51 lbs. per bushel, and 1 ton 5 cwts. 2 qrs. and 2 lbs. of straw."*

SECTION XI.

Experiments Testing Salt.

The manurial value of salt was fully discussed in Sections VIII and XI of last year's report and has already been referred to in Sections VIII and IX of this report. As explained in Section XI of the report of 1881 the experiments grouped under it were undertaken with the view of testing the power of common salt to stiffen the straw of the cereals and consequently, to prevent them from lodging. The results of hundreds of experiments and the testing of many practical farmers in different countries have been cited from time to time in favor of its claims.

A New York farmer writes as follows: "The experiments of S. M. Brown several years ago showed that the application of salt on winter wheat was obviously advantageous. The effect seemed to be in the stiffening of the straw, by which its falling down and rusting, thus shrinking the berry, was prevented." Another writer observes: "Where salt was used, previous to that time the grain was always flat to the ground, but after the salt was used the grain stood up." Another farmer says that the advantage of an application of salt "is greatest in dry seasons, and where sown with wheat. It is found that salt makes the straw of all grain brighter and the berry plumper. It is claimed especially for its use on barley, that it makes the grain fill more slowly in hot and dry weather."†

These are the views of practical men. The theories of several scientific writers in regard to its action are given in Section XI of last year's report. It may be well to add here the views of Dr. Voelcker: "Although I do not look upon chloride of sodium and soda salts in general as essential ash constituents of plants, I am far

*Ibid.

†Michigan Board of Agriculture. Pages 265 et seq.

from denying the beneficial effect which salt is capable of producing in particular cases. Indeed my own experience leads me to admit that salt is a useful and cheap manure, which judiciously applied, frequently yields a large increase of corn, roots or hay and seldom does any harm.* He goes on to remark that it produces the best effects in porous, sandy soils. "On the other hand, it does mischief where it is applied in excessive doses to stiff, wet, clay soils, and soils generally which are cold, and bring their grain, root, and grass crops slowly to maturity, for salt has a remarkable tendency to prolong the period of vegetation and delay the arrival of maturity." Again: "As common salt certainly has the power of prolonging the period during which our cultivated crops can be kept growing in the field, much advantage can be derived from its use by the intelligent agriculturist, who, bearing in mind the circumstances, under which it is desirable to prolong the life of the plants, will chiefly employ it as a top-dressing or otherwise where he has to do with light, porous, and naturally dry soils." Like Boussingault and Liebig he believes that its beneficial action is indirect. "It will be seen," he says "that the value of a fertilizing agent does not always depend upon the fact that it is an essential element of nutrition: the substances which we apply to the land with a view of increasing our crops may have no value whatever as a direct fertilizer, and may, as in the case of chloride of sodium, not even make its appearance in our grain crops, and yet it may be instrumental in materially raising the produce of wheat. Again, such non-essential salts in general may nevertheless play an important part in the nutrition of plants by assisting the solution and uniform distribution of fertilizing constituents which occur in the soil in a sparingly soluble or insoluble condition. It is well known to chemists that chloride of sodium exercises a dissolving action upon some substances, and thus it is not too great a stretch of fancy to assume that it will act beneficially in the field by dissolving and rendering available earthy fertilizing constituents which without its aid will remain in an inert condition for a long time."*

Four of the experimental plats grouped together under this section were situated in Series 1, and two in Series 2. The land was of the kind upon which salt could be reasonably expected to give beneficial results.

*Journal Royal Agricultural Society. 2nd Series Vol. 1. Pages 299 et seq.

TABLE XI.

EXPERIMENTS TESTING SALT.

Plats 1-16 Acre each. Drilled. 4 Pecks per Acre.

No. of Plat.	VARIETY.	SALT. HOW APPLIED.	Amt of salt per acre bus.	Yield per Plat		Yield pr. Acre		Lbs. straw, etc. to 1 lb. of grain
				Straw, etc., lbs.	Grain. lbs.	Straw, etc., lbs.	Grain. bus.	
lx	Champ'n Amber*	Appl'd as top-dressing in spring	8	61	44	976	11 73	1.38
lix	Boughton*	Applied as top-dressing }	8	96	54	1,536	14.40	1.77
xvii	Champ'n Amber*	Undressed	0	79	61	1,264	16.26	1.29
xviii	Boughton*	Undressed	0	96	49	1,536	13.06	1.96
lxxx	Boughton†	Dril'd in with wheat	8	205	85	3,280	22.66	2.53
lxx xvii	Boughton†	Unfertilized	0	135	67	2,160	17.86	2.01

*Sown October 19th and 20th.

†Sown October 21st.

On plat LX, seeded with red wheat, 8 bushels of salt were applied as a top-dressing in March. Upon comparing it with XVII, the undressed plat seeded with the same variety, it is very evident that the application was without benefit to the crop. The difference in favor of the undressed plat must not be ascribed, however, to the injurious effects of the salt, but rather to differences in the fertility of the plats. In the experiments with the white wheat (Boughton) the dressing of salt shows a slight increase. In the two last experiments of the table the same quantity of salt, 8 bushels per acre, was drilled in with the wheat. Here, there is a marked difference (4.80 bushels) in favor of the salt. The experiments were very inconclusive; the difference in the yields of the several plats being in all probability as much due to differences of fertility as to the action of the salt. The applications of salt were certainly attended with no profit.

In 1880, plats upon which salt was sown were as badly rusted as the undressed ones, and last year those dressed with 8 bushels of

salt per acre were equally as badly lodged as the undressed. But one of the experiments of the several years admits of comparison ; top-dressing in the spring with 8 bushels salt per acre.

TABLE I.

EXPERIMENTS OF SECTION XIII FOR 1881 AND 1882.

AMOUNT OF SALT PER ACRE AND HOW APPLIED	Increase (+) or Loss (—) of Straw, etc., per Acre.			Increase (+) or Loss (—) of Grain per Acre.		
	1881. lbs.	1882. lbs.	Average Pounds.	1881. bus.	1882. bus.	Average Bushels.
Eight bushels applied as top-dressing in Spring. }	†1,280	—288	†496	000	—4.53	—2.26

It will be seen from the table that in 1881 there was no increase from the use of salt and in 1882 that there was, apparently, a considerable decrease. The average for the two years shows a loss of 2.26 bushels of grain per acre, but a slight increase of straw.

SERIES III.

It was deemed advisable for the reasons given in the reports of 1880 and 1881 to make the experiments with the commercial fertilizers offered for sale in the markets of East Tennessee as fair and accurate as possible. For this purpose the tests of Series II were duplicated in the field. Six lots of $\frac{1}{2}$ acre each, and one of $\frac{1}{4}$ acre were accordingly laid off in the same field in which the plats of this section were situated last year and the year before, and were only separated from them by a narrow farm road. The soil of the field was a dry, gravelly loam, of good natural drainage. The land, after lying in clover a few years, was broken up and planted with corn in the spring of last year, 1881. About 150lbs. of a commercial fertilizer was drilled with the seed. The crop was well worked and was of fair average quality and quantity. It was again ploughed last fall and seeded with 6 pecks per acre of Key's Prolific, a bearded red wheat. 200lbs. of the fertilizers were drilled in with the wheat. The field was thoroughly harrowed and rolled this spring (1882).

The plats were of the same shape as those of the preceding years much longer than broad. One plat was left unfertilized.

SECTION XII.

Field Tests of Commercial Fertilizers.

The plats were apparently alike in soil, situation and aspect. Two of the fertilizers experimented with last year were not obtainable in our market this year. Hence for Baldwin's Ammoniated Dissolved Bone we were obliged to substitute a very similar brand manufactured by the same company, Baldwin's Bone Compound. And instead of the Locust Point Compound we used the "Star Brand," a fertilizer manufactured by Allison & Addison, of Richmond, Va. The fertilizers tested were all high grade articles, of established reputation. 200lbs. of each fertilizer was used instead of the 150lbs. experimented with the two preceding years. The results are given in Table XII.

TABLE XII.

FIELD TESTS OF COMMERCIAL FERTILIZERS.

Lots $\frac{1}{4}$ acre each. Drilled Oct. 25th. 6 Pecks per Acre Key's Prolific.

No. of Lot.	FERTILIZER.	Am't of Fertiliz'r per acre. Pounds.	Yield per Lot.		Yield pr. Acre		Lbs. of Straw, etc., to 1 lb. Grain
			Grain. lbs.	Straw, etc. lbs.	Straw, etc. lbs.	Grain. bus.	
clii	Soluble Pacific Guano*.....	200	450	275	1,800	18.33	1.64
cliii	Baldwin's Bone Compound	200	737	448	1,474	14.93	1.64
cliv	Ober's Ammoniated Su- } perphosphate of Lime. }	200	640	400	1,280	13.33	1.60
clv	Unfertilized.....	000	700	460	1,400	15.33	1.52
clvi	Anchor Brand..	200	745	440	1,490	14.66	1.69
clvii	Chesapeake Guano.....	200	690	410	1,380	13.66	1.68
clviii	Star Brand.....	200	650	375	1,300	12.50	1.73

* $\frac{1}{4}$ Acre.

It is evident that but one of the fertilizers was of any benefit to the crop. As compared with the unfertilized plat Soluble Pacific Guano shows a gain of 3.00 bushels of grain and 400lbs. of straw per acre; all the others show a loss of grain; the Baldwin of 0.40 bushels, the Anchor Brand of 0.67 bushels, the Chesapeake of 1.67 bushels, and the Ober of 2.00 bushels per acre. The slight differences in the yields afforded by the several fertilizers may be safely attributed in large part to differences of soil. The unfertilized plat had very probably some advantage in soil unsuspected by us; for it can hardly be argued that the fertilizers injured the yield. But the fact is very evident that they gave no increase; in this respect the results of the different tests, with the exception of the Soluble Pacific, support each other. An application of 200lbs. per acre of a high priced fertilizer is both a liberal and expensive one. The Soluble Pacific is the only one that does not show a serious pecuniary loss, and even it did not give an increase sufficient to pay for its cost. The results of these field tests support, therefore, those of the smaller experimental plats, and are unfavorable to these fertilizers. But as it has been so often remarked before, the tests of a single season are very unsafe guides.

For on comparing together those tests of this section for the last 3 years that will admit of comparison, we see the importance of this caution. The comparison is given in Table M.

TABLE M.

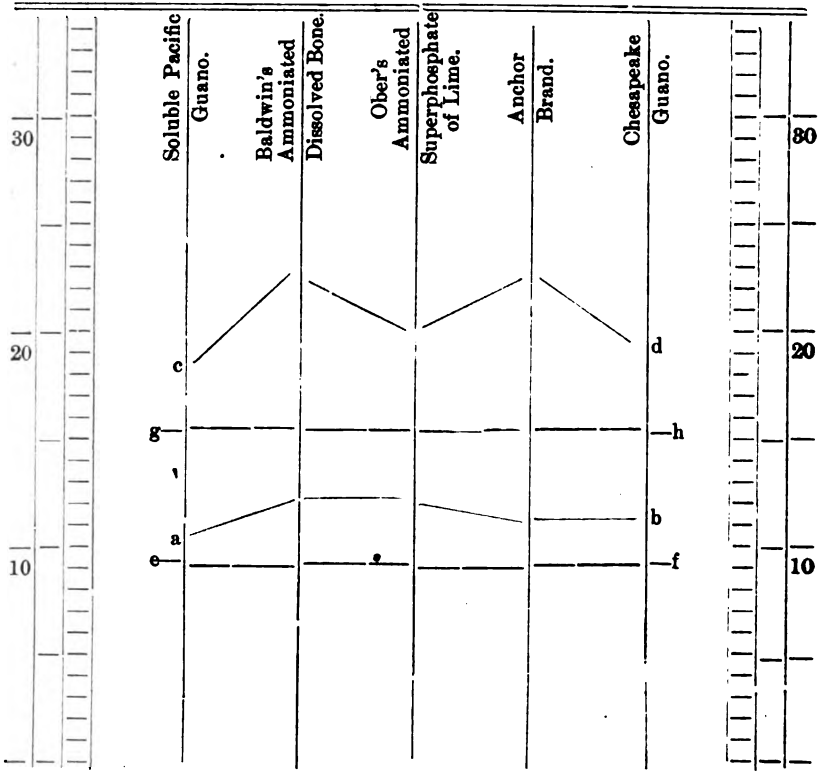
EXPERIMENTS OF SECTION XII FOR 1880, 1881 AND 1882.

FERTILIZER.	Am't of Fer-tiliz'r per acre. Pounds.	Increase of Straw, etc., per acre.				Increase of Grain per Acre.			
		1880. lbs.	1881. lbs.	1882. lbs.	Av. lbs.	1880. bus.	1881. bus.	1882. bus.	Avr'ge lbs.
Soluble Pacific Guano...	150†	—	† 3	†400	†201	—	†0.56	†3.00	† 1.78
Baldwin's Ammoniated Dissolved Bone*...	150†	†1534	†342	† 74	†650	†10.30	†2.72	-0.40	† 4.34
Ober's Ammoniated Superphos. of Lime..	150†	†1087	† 98	-120	†355	†10.00	†4.29	-2.00	† 4.09
Anchor Brand.....	150†	†1190	†619	† 90	†633	† 5.80	†4.12	-0.67	† 3.08
Chesapeake Guano.....	150†	† 304	†765	- 20	†349	† 3.90	†6.62	-1.67	† 2.95

*Baldwin's Bone Compound in 1882.

†200lbs. in 1882.

The Soluble Pacific was only used last year and this, and its average, of two years only, cannot justly be compared with those of the others. Last year it gave a very slight increase of grain, the smallest of the entire section—this year it gave by far the best. Its average increase for the two years was 1.78 bushels per acre. Examining next the average of the fertilizers tested for the last three years, we find that the Baldwin gave the best average increase, 4.34 bushels per acre. In 1880 it gave the best results, in 1881 next to the worst, and in 1882 the second best (if a loss can be so denominated). The Ober gave very nearly the same average increase as the Baldwin, 4.09 bushels. In 1880 it gave the second best results, in 1881 the second best, and in 1882 the worst. The average of the Anchor Brand stands third, an increase of 3.08 bushels per acre. It occupied about the same relative position each year. The Chesapeake gave the smallest average gain, 2.95 bushels per acre; and yet last year it gave the largest. These results are clearly brought out in the following diagram:

TABLE *m*.GRAPHIC REPRESENTATION OF AVERAGES OF TABLE *M*.Scale and letters as in Table *g*;

The slight differences between the fertilizers, the small increase, and the want of parallelism in the lines representing the straw and grain can be seen at a glance.

It appears then, that fertilizers, like men, have "their ups and downs" from year to year.

It may be of interest to compare these averages with those afforded by the small experimental plats. Upon turning back to Table *g*, p. 104, and averaging the increase afforded by 100lbs. and 200lbs. of each of the fertilizers, we find that the relative positions of the four fertilizers experimented with for three years are the same as in the field tests—the Baldwin giving the largest average increase,

the Ober next, the Anchor Brand next, and the Chesapeake the smallest. For the average increase of the two Baldwin brands, thus arrived at, is 4.11 bushels—in the field tests it is 4.34 bushels; of the Ober 1.73 bushels; of the Anchor Brand 1.65 bushels and of the Chesapeake 0.38 bushels. In the field tests the averages (of increase) of the three last were respectively 4.09 bushels, 3.08 bushels and 2.95 bushels. In the Baldwin tests the results of the two sets were strikingly alike; in the others the field tests were rather more favorable than those of the small experimental plats. But, on the whole, the results are remarkably uniform, and are certainly unfavorable to the fertilizers; and such tests, by reason of their number, variety and long continuance, are worthy of special attention.

SECTION XIII.

Experiments Testing Effects of Harrowing Wheat in Spring.

In many sections of the North and Northwest, the practice of harrowing and rolling wheat in the spring appears to be the rule; in the South, however, it is certainly the exception. Here, many farmers are prejudiced against it. Far from believing it beneficial, they hold that it is injurious—that the harrow necessarily pulls up, mutilates and destroys the young plants. And even at the North, while the majority of the farmers will tell you that the harrow pulverizes and opens up the soil, compacted and run together by the winter's rain, destroys the young weeds and grass, and cultivates and pushes forward the wheat, they can not tell you whether the increase afforded by the practice will always, or even generally, pay for its cost. Their experience is too often given in vague and general terms. An article headed "How a successful man cultivates and pastures wheat," is a fair illustration. John Rosser, of Indiana, after stating that his "crop ranges all the way from 25 to 40 bushels to the acre," declares that he attributes his success to the following practice: "As soon as my wheat is an inch high I put my sheep into it, and keep them there all the winter, changing the pasture every few weeks, however, merely as an alterative, and they come off it in the spring fat enough for mutton." "I attribute," he says, "my large crops to this process; for, in the first place, the roots are well tramped in, thus preserving them in a measure from the weather; then I have an excellent manure evenly and properly

10—Univ.

distributed every year. Besides this, the first growth always dies off anyhow, and I save it by making it an excellent feed for my sheep." "So soon as the sheep are taken off in the spring, and the ground is dry enough, I invariably run a heavy three-horse harrow over it, in a line with the drill, if I can, but of that I am not very particular. This is followed by a good, heavy roller at once, thus crushing all of the remaining clods, pressing the stones, if any there are, into the soil and thus fitting it for the harvester."*

Careful experiments are needed to establish the beneficial effects of the practice of harrowing wheat in the spring, and to assure the farmer that it will generally give him profitable returns. Before proceeding to discuss the results of the experiments of this section, it may be as well to give in full some experiments by Prof. Shelton, the Kansas State Agricultural College, the results of which are favorable to this practice.

"The advantages of harrowing wheat in the spring are frequently recited by the agricultural press and the increased yield resulting I have seen placed all the way from five to ten bushels per acre. Still the practice is not a common one, although those farmers who once begin it, rarely give it up, which is itself good evidence of the usefulness of the practice. In the winter of 1879-80 I selected a portion of a wheat-field very uniform as to soil, situation and the condition of the crop, and in this laid off six plats, exactly one-fourth of an acre each, with the object of testing the advantages, if any, of harrowing growing wheat. Each alternate plat, beginning with the first, was thoroughly harrowed on February 26th; and on April 13th these plats were again harrowed and immediately afterwards rolled. The intervening plats, of course, received no special treatment. The results of this experiment may be seen in the subjoined table, in which the plats are given in the exact order in which they were placed in the field."

*Farm, Herd and Home. Vol. 11. No. 1. Pag 5.

	YIELD PER ACRE.	
	GRAIN. Bushels.	STRAW. Pounds.
" Plat A, Harrowed.....	17.13	1,760
" B, Unharrowed.....	11.98	1,164
" C, Harrowed.....	12.40	1,220
" D, Unharrowed.....	11.86	1,296
" E, Harrowed.....	16.13	1,672
" F, Unharrowed.....	14.53	1,828
Average yield of harrowed plats.....	15.21	1,550
Average yield of unharrowed plats.....	13.76	1,429
		1,429
Increase yield of harrowed plats.....	1.45	121."

"It will be observed that the yield of grain in every case, in the harrowed plats, exceeded the yield of the adjoining unharrowed plats, a fact which seems to show, pretty conclusively, that this increased yield was caused by the harrowing and by nothing else. It is true that this increased yield of less than one and one-half bushels of grain and one hundred and twenty-one pounds of straw in the harrowed plats, is not large, but it is enough to give good pay for the labor of running a light harrow twice and a roller once over the field, and at a season when farm labor is not particularly pressing."*

The results of my experiments were by no means as conclusive as these.

The experiments of this and the two succeeding sections properly fall under Series 1.

The tests were duplicated by using two wheats—the one red, the other white. The full details of the experiments are given in Table XIII.

*Rural New Yorker. Vol. XL. No. 1650. Page 619.

TABLE XIII.

EXPERIMENTS TESTING EFFECTS OF SPRING HARROWING.

Plats 1-16 Acre each. Drilled Oct. 19th and 20th. 4 pecks per Acre. Unfertilized.

No. of Plat.	VARIETY.	TREATMENT.	Yield per Plat		Yield per Acre		Lbs. Straw &c., to 1 lb. of Grain.
			Straw etc. lbs.	Grain. lbs.	Straw &c. lbs.	Grain, Bus.	
lvii	Champion Amber	Harrowed March 21	43	42	688	11.20	1.02
lviii	Boughton	Harrowed March 21	44	31	704	8.26	1.42
xvii	Champion Amber	Not Harrowed.	79	61	1,264	16.26	1.29
xviii	Boughton	Not Harrowed.	96	49	1,536	13.06	1.96

Two of the plats were thoroughly harrowed early in the spring. The land was apparently of uniform fertility throughout. The results are at first sight strongly against harrowing, but the larger yields of the plats not harrowed were most probably due in great measure to their superior fertility. And yet, even with all due allowance for this cause of difference, it is plain that the harrowing could have produced but little, if any, effect. And, of course, its cost is an item that must always be considered. Recent experiments at the New York Agricultural Experiment Station are almost as inconclusive as mine. Dr. Sturtevant, the Director, thus describes them :

“ Our wheat field was said to have been sown last fall with two bushels of seed per acre, and a portion cross-drilled, perhaps with more seed, but said to be the same seeding. On April 3d, nine series of full plats of $\frac{1}{10}$ acre each were staked out, and nine half plats of $\frac{1}{20}$ acre each. The field was harvested July 19th, and the grain threshed August 8th. The plats varied in yield considerably, but it is difficult to say how much variation was caused by the quality of the land, or by the winter killing, or how much is to be ascribed to treatment. It seems probable that the results justify a belief that cross-drilling, whether with more or the same quantity of seed as the single drilled we cannot know, gave a larger yield than single drilling, and that harrowing possibly resulted in a gain. We present the table of yields, and the method of equal areas will

admit, as will be perceived, various conclusions to be figured out, according to the prepossessions of the examiner."

"Whole Plats.		Treatment.	Yield per Acre.
No. 1.....	Drilled—Nothing,	34.58 bus.	
" 2.....	" Harrowed,	31.42 "	
" 3.....	" Trampled,	29.96 "	
" 4.....	Four drills obliterated by cultivation and two drills left.....	15.50 "	
" 5.....	Drilled—Nothing,	36.62 "	
" 6.....	Partly drilled, partly cross-drilled—Nothing,	38.37 "	
" 7.....	Cross-drilled—Harrowed,	42.12 "	
" 8.....	" " Nothing,	39.54 "	
" 9.....	" " Trampled,	38.96 "	
Half Plats.		Treatment.	Yield per Acre.
No. 10.....	Drilled—Mown,	21.92	
" 11.....	" Harrowed and rolled	26.83	
" 12.....	" Nothing,	29.00	
" 13.....	Four rows obliterated by cultivation and the two rows left, trampled.....	14.33	
" 14	Four rows obliterated by cultivation and the spaces rolled	21.42	
" 15.....	Partly drilled, partly cross-drilled	37.36	
" 16.....	Cross-drilled, harrowed and rolled	34.17	
" 17.....	" " and mown	26.23	
" 18.....	" " Nothing,	32.25."	

"The operations were all done in the spring and the plats are numbered consecutively, half-plot 10 being at the end of the whole plot 1, and half-plot 18 being at the end of whole plot 9."

"The seven nothing plats, as will be seen, give an average yield of 35.4 bushels, and a variation of 10.5 bushels as between the highest and the lowest."

"The two harrowed plats an average yield of 36.7 bushels, and a variation of 10.7 bushels per acre." "The two trampled plats show 34.4 bushels for an average yield and 9 bushels for variation."

"The two harrowed and rolled show 30.5 bushels for an average and 7.3 bushels for variation." The two mowed plats 24.1 bushels for an average and 4.4 bushels for variation." "The seven drilled plats an average of 30 bushels, and the six cross-drilled an average of 35.5 bushels per acre."

"The true conclusion, as it seems to us, is that this method of experimentation did not admit of definite conclusions, but that the probabilities are that on this field spring harrowing was an advan-

tage, and if the same amount of seed was used in the sowing, cross-drilling was also of advantage. These unsatisfactory results are, however, to be expected in the first season's work."*

Harrowing wheat in the spring, it is very certain, will prove far more beneficial on some soils than on others. On thin soils, destitute of vegetable matter and heavy compact ones inclined to bake, it will probably give profitable returns. Light sandy soils, puffy clays, and rich friable loams if clean, do not need it.

SECTION XIV.

Experiments Testing Effects of Early Cutting.

The experiments of this section were designed to test the relative effects of early and late cutting. It was our intention to make, in connection with these tests, careful analyses of the grain from the different plats in order to determine the effects of differences in the time of cutting upon the nutritive constituents of the wheat. Owing, however, to a mistake the grain from the different plats was not kept separate, and the latter, and most important, part of the programme was of necessity abandoned. The experiments are in consequence incomplete and are merely offered for what they are worth.

The advocates of early cutting claim that it will give more grain by weight per acre, and also that it affords a finer and plumper grain, whiter flour and a far better quality of straw. When rust makes its appearance early cutting will often save a crop which would otherwise be destroyed, a few days making all the difference between partial success and utter failure.

The advocates of late cutting, declare on the other hand, that early cutting injures the wheat for seed and that the maximum amount of gluten is found only in fully ripe grain. They say also that wheat cut early will shrink and depreciate in market value. Now that the patent process is so largely replacing the old-fashioned method of grinding, hard wheats are in great demand, and there is a tendency to let the crop stand in the field until fully ripe.

Dr. Kedzie, of the Michigan Agricultural College, has published a most valuable series of investigations bearing directly upon this

* Bulletin No. IV.

question. His very numerous analyses show "that the highest percentage of albuminoids is formed in the earliest stages of growth and that it falls off regularly to the complete ripening of the seed, which contains relatively less albuminoids than at any previous period of growth. The claim that gluten is principally formed near the close of the process of ripening, and that the dead ripe wheat contains more gluten than wheat harvested at some earlier period of growth, receives no support from the result of these analyses. The hard and flinty berry secured by over-ripening is no richer in gluten than the softer berry secured by early harvesting." But he holds also, as the result of his investigations, that "while the albuminoids are centessimally greater at earlier periods of growth, the average product increases with the growth of the crop up to a certain stage of ripening (when the grain crushes dry), and after this period there is no increase either relatively or absolutely."*

The details of the experiments of this section are given in Table XIV.

TABLE XIV.

EXPERIMENTS TESTING EFFECTS OF EARLY CUTTING.

Plats 1-16 Acre each. Drilled Oct. 19th and 20th. 4 pecks per Acre. Unfertilized.

No. of Plat.	VARIETY.	WHEN CUT.	Yield per Plat.		Yield per Acre		Lbs. straw, etc., to 1 lb grain.
			Straw, &c. lbs.	Grain. lbs.	Straw, &c. lbs.	Grain. bus.	
ixi	Champion Amber...	In Dough State...	42	33	672	8.80	1.27
lxii	Boughton	In Dough State...	39	36	624	9.60	1.08
xvii	Champion Amber...	Fully Ripe	79	61	1,264	16.26	1.29
xviii	Boughton	Fully Ripe.....	96	49	1,536	13.06	1.96

The soil and history of the plats can be found under the head of Series I. The experiments are in duplicate. The grain cut in the dough state could be easily crushed in the fingers. After making

*Journal of American Agricultural Association, Vol. I, Nos. 3 and 4, Page 130.

all due allowance for differences of fertility it appears that cutting the wheat so early reduced the yield.

SECTION.XV.

Experiments Testing Effects of Preceding Crops.

The foregoing experiments afford an easy means of comparing the effects of preceding crops on the wheat. Many of the experiments were duplicated and these duplicates, taken from sections differently treated in the past, are grouped together under this one. The results are set forth in Table XV.

TABLE XV.

EXPERIMENTS TESTING EFFECTS OF PRECEDING CROPS.

Plots 1-16 Acre each. Drilled Oct. 29th—Nov. 4th. 4 Pecks Boughton per Acre.

No. of Plots.	PRECEDING CROP AND HOW TREATED.	SIXTEEN TONS WORKED IN BEFORE SEEDING.	Yield per Plot.		Yield pr. Acre		Straw, etc. to lb. grain
			Straw, etc. lbs.	Grain. lbs.	Straw, etc. lbs.	Grain. bus.	
lxiv	Corn fertilized in hill..	Green Manure	103	82	1,648	21.86	1.25
lxv	Same	Rott'd Manure	70	65	1,120	17.33	1.07
lxix	Same.....	Unmanured ...	17	33	272	8.80	0.51
lxxxix	Corn fertiliz'd in hill. } Heavy crop of rye } turned under for it. }	Rott'd Manure	128	72	2,048	19.20	1.77
lxxxiv	Same	Unfertilized ..	134	58	2,144	15.47	2.31
cxviii	Same	Green Manure	128	69	2,048	18.40	1.85
cxix	Same	Unfertilized ...	85	47	1,360	12.53	1.81
cxixix	Clover sod turned } under in spring wild } grasses in October.. }	Rott'd Manure	66	39	1,056	10.40	1.69
cxixixiii	Same	Unfertilized ...	53	22	848	5.86	2.40

The subject of rotation of crops is an old one, which has been thoroughly discussed time and again, and it is unnecessary to touch upon it here. The advocates of chemical manures are now claiming that the same field can be kept in the same crop year after

year by the use of the different salts and that this practice enables the farmer to devote his land to the crop that will pay him best. They, therefore attach but little importance to the doctrine of rotation. But in any system of mixed husbandry its practical advantages in the way of diversified cropping, economy of labor and manures, high cultivation, etc., still commend it to be the thrifty and progressive farmer.

The effects of a preceding crop are plainly shown by the results of the experiments of the table. It may be of interest to notice these somewhat in detail. As already explained, the experimental plats of all the Series were situated in the same level field. Series I was separated from Series II by a narrow farm road. The soil of all was originally the same. For some years past our practice had been to plant different portions of the field, varying from one to ten acres, in different crops. Hence these several portions differed in fertility.

The adjoining plats LXIV, LXV and LXIX were in corn last year. A handful of a compost of $\frac{1}{2}$ plaster, $\frac{1}{2}$ bone meal, and $\frac{1}{2}$ muck, was dropped in each hill along with the corn. The crop was well worked and the land thoroughly prepared for the wheat. The results of these experiments have already been discussed in another connection. It is sufficient to notice, here again, the fact that the green manure gave an increase of 13.06 bushels as compared with the unfertilized plat, and 4.53 bushels more than the rotted. The latter gave an increase of 8.53 bushels per acre.

The next 4 plats, LXXXIX, LXXXIV, CXVIII and CXIX, were situated on the opposite side of the road from the preceding. These plats were also in corn last year. A heavy crop of rye, in full bloom, was ploughed under in April and the same compost described above, was dropped in the hills along with the corn. As compared with the yield of the adjoining unfertilized plat the rotted manure shows an increase of 3.73 bushels per acre, comparing in the same way the yield of the plat dressed with green manure with that of the adjoining unmanured plat we have an increase of 5.87 bushels. Here again, as in the preceding experiments, the green manure gave a larger increase than the rotted. Upon comparing the first set (3) with those of the next (4), we see that the only difference in the preceding treatment was the heavy crop of rye turned under in the latter. All the other conditions were the same. Hence it

is possible to estimate the effects of the vegetable matter ploughed under. These are shown in the yields of the unfertilized plats of the last set. One plat gave 15.47 bushels per acre, the other 12.53 bushels, the average being 14.00 bushels. In the first set the unfertilized plat yielded only 8.80 bushels per acre. It is certainly safe to attribute a part at least of this difference of 5.20 bushels to the effects of the rye. And this conclusion is not affected by the fact that the green manure in the first set gave a larger yield (21.86 bushels) than the same quantity of the same manure in the second (18.40). In the first set the land was most probably deficient in vegetable matter—hence the large yield afforded by the green manure. In the second, the land was already well supplied with the same matter by the crop of rye turned under, and the green manure shows therefore, a smaller yield. The rotted manure being comparatively richer in mineral matters gave, on the other hand a larger yield, in the second set than in the first for the same reason. The second set are, therefore, decidedly favorable to the ploughing under of a green crop, such as rye, a hoed crop preceding the wheat.

With these should be compared the last two experiments of the Section. A fair clover sod, of 3 years' standing, was broken up late in the spring and planted in beans, lucerne, lupins, and other hoed crops. The land was hard and dry when ploughed and was with difficulty brought into fair condition by repeated harrowings and rollings. In consequence of the prolonged drought, which set in a few days after they were planted, these crops were all more or less failures and were soon abandoned. The land was soon overrun by crab grass, which was cut for hay in the summer. The aftermath was turned under for the wheat. It would appear, from the yield of the two plats that this treatment was injurious, rather than beneficial, to the land: why it is not easy to say. The rough preparation in the spring, the exposure to the sun in the late spring and early summer, and the want of tilth in the fall were among the probable causes. The unfertilized plat gave a yield of 5.86 bushels, as against 8.80 bushels, the yield of the unfertilized plat in the first set, and 14 bushels the average yield of the unmanured plats of the second set. The rotted manure, again, gave only 10.40 bushels as against the 17.33 bushels of the first set and the 19.20 bushels of the second.

The results of the foregoing experiments show very clearly the

marked effects of the preceding crop on the following wheat crop. They emphasize, also, the importance to the wheat plant of thorough tilth and an abundant supply of vegetable matter in an easily assimilable condition.

TOP-DRESSINGS ON CLOVER AND GRASS.

SERIES IV.

This Series is the same as series V of last year and includes experiments testing the effects of top-dressings of various kinds on clover and grass. The experiments will be discussed under two Sections.

SECTION XVI.

Experiments in Top-Dressing Clover.

The experiments of this and the next Section were exact repetitions of those of last year, and as their nature and objects were explained at great length in the report of 1881, it is unnecessary to discuss them in this. On page 127 *et seq.* of that report the effects of plaster and other mineral manures upon clover were especially noticed and the different theories in regard to their action reviewed. And on page 135 a table showing the amounts of sulphuric acid and the bases furnished by the different applications of salts employed was given. We can, therefore, without further preface, proceed to discuss the results of the experiments of the present year. These are given in Table XVI.

TABLE XVI.

EXPERIMENTS IN TOP-DRESSING CLOVER.

Plats 1.16 acre. Fertilizers applied in spring.

No. of Plat.	FERTILIZER.	Am't of Fertilizer per acre. Pounds.	Total yield of hay pr acre in two cuttings. Pounds.
i	Plaster.....	16½	7,392
ii	Plaster.....	220	5,880
iii	Lime (air slaked)	120	5,040
iv	No Manure.....	000	5,680
v	Ground Limestone	120	5,120
vi	Sulphate of Potash	110	7,200
vii	Sulphate of Magnesia.....	75	6,320
viii	No Manure.....	000	6,320

The plats were laid off in the meadow described in last year's report. No top-dressings were applied in any of the preceding years. The fertilizers were spread by hand early in the spring when the young clover began to exhibit signs of vigorous growth, and in the morning while the plants were wet with dew. The average yield of the two unfertilized plats, IV and VIII, was 6,000 lbs. per acre, the difference between the two yields being 640lbs., or a little more than $\frac{1}{4}$ ton. This difference may be assumed to represent the "natural variation" of the plats of this Section. Taking the above average yield, 6,000lbs., as the standard of comparison, we see that but three applications show any increase whatever—16½lbs. of plaster on plat I, 110lbs. of sulphate of potash on No. VI, and 75lbs. of sulphate of magnesia on No. VII. But the yield of the last plat is exactly the same as that of the adjoining unmanured plat VIII, 6,320lbs., and as to the first it is hardly to be presumed that as small a quantity of plaster as 16½lbs. per acre could increase the yield by nearly 1,400lbs., and the more especially as a much heavier application of the same substance on the next plat was without effect on the crop. The increase must in great part be ascribed

to the exceptional fertility of the plat. The same is perhaps true, in part, of the sulphate of potash. Hence we may safely conclude that the several applications failed to produce decidedly beneficial results. Indeed, it is a question whether the two applications of lime were not injurious.

Upon comparing these results with those of the same experiments last year we find a close correspondence between them.

TABLE N.

EXPERIMENTS OF SECTION XVI FOR 1881 AND 1882.

FERTILIZER.	Amount of Fertilizer per Acre. Pounds.	Yield of Clover Hay pr Acre		
		1881. Pounds.	1882. Pounds.	Average. Pounds.
No Fertilizer.....	00	5,216	6,000	5,608
Plaster.....	16½	4,768	7,392	6,080
Plaster	220	5,712	5,680	5,696
Lime (air-slaked).....	120	4,960	5,040	5,000
Ground Limestone.....	120	4,752	5,120	4,936
Sulphate of Potash.....	110	5,552	7,200	6,376
Sulphate of Magnesia	75	5,440	6,320	5,880

As compared with the average yield of the unfertilized plats two of the applications, the air-slaked lime and ground limestone, gave no increase; two, slightly better yields, 200lbs. plaster and the sulphate of magnesia, and two, 16½lbs. plaster and the sulphate of potash, moderately fair returns. The applications of lime apparently injured the crop each year. The greater average yield afforded by the larger amount of plaster and the sulphate of magnesia, can be safely ascribed to the natural variation of the soil, and that of the smaller amount of plaster to the exceptional fertility of the plat upon which it was applied this year. As compared with the average yield of the unfertilized plats for each year the sulphate of potash shows an increase. Last year, however, it gave a yield inferior to that of the best unfertilized plat. Still, it alone of all the applications leaves any room for believing that its use was of bene-

fit to the crop. Not one gave an increase sufficient to pay for its cost. So far, then, the results of these experiments are unfavorable to applications of mineral manures upon clover. As remarked, however, in last year's report, it is well known that plaster and other salts act much better upon some soils than upon others. As therein advised, every farmer should test them for himself before using them largely, and the foregoing experiments are valuable inasmuch as they clearly bring out the fact that on certain soils they often fail altogether.

SECTION XVII.

Experiments in Top-Dressing Meadows.

The object of these experiments, as set forth in last year's report, was "to test the values of the different manures on old, 'run down' meadows." The plats, ten in all, immediately adjoined those of last year and their history and character are therefore the same. They were laid off in a flat immediately on the river. The land was seeded down in 1878 and received no manure in any subsequent year. The hay crops of 1879, 1880 and 1881 were all indifferent. The grass was chiefly timothy with some clover and orchard grass intermixed. The manures were applied in the same way as upon the clover. The plats were in two rows of five each. The results of the experiments are shown in the following table :

TABLE XVII.

EXPERIMENTS IN TOP-DRESSING GRASS.

Plats 1-16 acre. Fertilizers applied in spring.

No. of Plat.	FERTILIZER.	Am't of Fertilizer per Acre.	Yield of Hay per Acre. Pounds.
i	Clotworthy's Bone Meal.....	200 lbs.	2,320
ii	Plaster	100 lbs.	2,720
	Bone Meal.....	100 lbs.	
	Ashes.....	16 bus }	
iii	Baldwin's Bone Compound.....	200 lbs.	2,400
iv	Ober's Ammoniated Superphosphate of Lime....	200 lbs.	2,240
v	Unfertilized	000	1,760
vi	Lime	80 bus.	3,200
vii	Ashes	32 bus.	3,360
viii	Plaster	200 lbs.	3,120
ix	Plaster.....	100 lbs.	3,520
	Ashes.....	16 bus. }	
x	Ground Limestone	200 lbs.	3,680

The unfertilized plat gave a yield of only 1,760lbs. per acre. As compared with this every application shows an increase. It will be noticed that the yields of the last five plats (from VI to X inclusive) situated all in one row, were much heavier than those of the first five, situated in the other row. It is more than probable, therefore, that the two rows differed materially in fertility. This difference of fertility is the great, it might be said the almost insuperable, difficulty in the way of field experiments. It should always be carefully guarded against. One unmanured plat is not enough in experiments of this kind. The plan of this section contemplated two, but owing to a misunderstanding of instructions one was left out.

Taking the results as they stand and for what they are worth, it appears, first, that applications of bone meal, ashes and plaster, of Baldwin's Bone Compound and of Ober's Ammoniated Superphosphate of Lime, all gave a moderate increase. The lime, the ashes,

and the plaster gave larger and very nearly the same gains. The mixture of plaster and ashes and the ground limestone more than doubled the yield, the latter giving the best returns of all. Greater value attaches to the average results of the experiments of this section for the last two years, as the probabilities are that the errors of the one year are, at least, in part corrected by those of the other.

TABLE O.

EXPERIMENTS OF SECTION XVII FOR 1881 AND 1882.

FERTILIZER.	Amount of Fertilizer per Acre.	Yield of Hay per Acre.		
		1881. Pounds	1882. lbs.	Average Pounds.
Unfertilized	000	1,488	1,760	1,624
Clotworthy's Bone Meal.....	200lbs.	1,952	2,320	2,135
Plaster.....	100lbs. }	1,808	2,720	2,264
Bone Meal.....	100 " }			
Ashes.....	16bus* }			
Baldwin's Bone Compound.	200 lbs.†	3,888	2,400	3,144
Ober's Ammoniated Superphosphate of Lime....	200 lbs.	3,480	2,240	2,864
Plaster.....	200 lbs.	2,608	3,120	2,864
Lime.....	80 bus.	1,568	3,200	2,384
Ashes.....	32 bus.	2,512	3,360	2,936
Plaster.....	100 lbs }	2,352	3,520	2,936
Ashes.....	16bus* }			
Ground Limestone.....	200lbs.	1,902	3,680	2,791

*32 bushels in 1881. †Baldwin's Ammoniated Dissolved Bone in 1881.

It will be noticed that the unfertilized plats gave very nearly the same yield each year. Here, again as compared with their average, all the applications show average gains. But it should also be noticed that several of the manures which gave the best results one year gave the worst the other and *vice versa*. The ground limestone, for example, gave very poor returns in 1881, in 1882 it gave the best. With the Baldwin the reverse was the case. It gave,

however, the largest average increase of all the applications. The ashes and the mixture of ashes and plaster gave the next largest, and the Ober and the plaster the next. It would appear from these experiments that top-dressings of commercial and mineral fertilizers were of decided benefit to the grass.

EXPERIMENTS WITH OTHER CROPS.

SERIES V.

This Series comprises experiments with Indian Corn, Dhurra, Sorghum, Rice, Buckwheat, Soja Bean, Teosinte, and Millo Maize. The experiments will be discussed under two Sections.

SECTION XVIII.

Experiments with Indian Corn.

The experimental plats were situated in the same field with, and immediately adjoined, the wheat plats of Series I. It is unnecessary, therefore, to give a description of the soil. They were just across the road from the corn plats of last year. The land was in corn and dhurra the year before. It was thoroughly prepared and the corn planted early in the spring. It was well worked and kept perfectly clean. The season was favorable and as the following table shows, a fair crop was harvested.

TABLE XVIII.

EXPERIMENTS WITH INDIAN CORN.

Planted in spring in hills 3 feet by 3 feet. Plats 1-16 Acre.

No. of Plat.	TREATMENT.	Am't of Manure per Acre.	Yield grain pr acre bus.
i	Fresh Barn-yard Manure spread as top-dressing.....	16 tons.	57.1
ii	Rotted Barn-yard Manure spread as top-dressing.....	16 tons.	48.0
iii	Fresh Barn-yard Manure ploughed under.....	16 tons.	52.5
iv	Rotted Barn-yard Manure ploughed under.....	16 tons.	72.0
v	Unmanured	000	51.4
vi	Dropped in hill { Bone Meal..... Muriate of Potash Plaster.....	{ 200 lbs. 100 lbs. 100 lbs. }	53.7
vii	Sulphate of Ammonia.....	200 lbs.	57.1
viii	Plaster	200 lbs.	53.7
ix	Unmanured	000	45.7
x	Lime	80 bus.	27.4
xi	Ground Limestone	400 lbs.	34.2
xii	Plaster..... Ashes.....	{ 200 lbs. 16 bus. }	61.9
xiii	Bone Meal.....	200 lbs.	42.2
xiv	Unmanured.....	000	30.8
xv	Ober's Ammoniated Superphosphate of Lime.....	200 lbs.	36.5
xvi	Baldwin's Bone Compound.....	200 lbs.	29.7
xvii	Refuse clover ensilage spread as a mulch. Plan not worked	fair covri'g	61.7
xviii	Unmanured	000	46.8
xix	Compost of $\frac{1}{2}$ Bone Meal, $\frac{1}{2}$ Plaster & $\frac{1}{2}$ muck dropped in hill	{ 1 hand- ful to hill }	33.7
xx	Unmanured.....	000	46.8
xxi	Unmanured. Corn planted half distance apart in row....	000	54.8
xxii	Unmanured. Corn planted half distance apart each way.	000	29.7

Five plats were left unmanured. Their average yield of grain was 44.3 bushels per acre. The difference between the yield of the best and the worst plat amounted to 20.6 bushels. Two of the plats gave exactly the same yield and the difference between the yields of the four best plats was not great. But a difference of 20.6 bushels shows a wide variation in fertility. If we accept this difference as representing the 'natural variation' of the soil, it would appear that but one application, the rotted manure ploughed under on No. IV, gave any increase in the crop. If we compare the yields with that of the best unfertilized plat, but few of the applications will show large gains. The best method, however, is, as in former cases, to compare them with the average yield of the unmanured plats—for the large number of these may be fairly presumed to represent the natural productions of the field. At the same time too much stress should not be laid on a yield not greater than that of the best unmanured plat.

Sixteen tons of rotted barn-yard manure ploughed under on No. IV gave seventy-two bushels per acre—an increase of 27.7 bushels per acre. There can be no doubt as to its highly beneficial effects. It gave ten bushels more than any other application, and twenty-four bushels more than the same amount of the same manure spread as a top dressing on plat II. It also gave much better results than either of the applications of fresh barn-yard manure. The same amount of rotted manure spread as a top-dressing shows a gain of only 3.7 bushels. Unlike the rotted, the fresh barn-yard manure gave better results when spread as a top-dressing. 'Plat I shows a gain of 12.8 bushels as compared with the average yield of the unmanured plats, and of 4.6 bushels as compared with No. III on which the same amount of the same manure was ploughed under. Its yield, it should be noticed, was exactly the same as that of No. VII on which 200lbs. of sulphate of ammonia was applied. This result is very favorable to the ammoniacal salt, but three applications gave better results. It is also worthy of remark that several of the mineral fertilizers gave better results than some of the applications of barn-yard manures. The fresh manure turned under increased the crop by 8.2 bushels. The mixture of plaster, bone meal and muriate of potash gave a somewhat larger increase, 9.4 bushels. Two hundred pounds of plaster shows the same increase. The application of lime was, if anything, injurious to the crop, so

was the ground limestone. The mixture of plaster and ashes gave the next best results of any application of the section, an increase of 23.6 bushels. The bone meal was without effect on the crop, so was the Ober and the Baldwin. The next experiment is the most interesting of all. A covering of damaged clover ensilage, spread over the plat immediately after planting, gave, without any subsequent cultivation, an increase of 23.4 bushels. The compost of bone meal, plaster and muck, shows a very fair gain—the same as that afforded by the plaster and by the mixture of bone meal, plaster and potash. The corn on plat XXI was planted at half the distance in the row, $1\frac{1}{2}$ feet, the rows as in the preceding plats being three feet apart. The plat received no manure. As compared with the average of the unmanured plats it shows an increase of 10.5 bushels as compared with the best unmanured plat, an increase of 3.4 bushels. From this it would appear that the drill planting is better than hills. On the last plat, No. XXII, the corn was planted at half the distance each way, in rows eighteen inches apart, and eighteen inches in the row. The yield was less than that of the poorest unmanured plat. Such thick planting was injurious.

From the foregoing it would appear that but three applications gave a decided and unmistakable increase—rotted manure ploughed under before planting, a mixture of plaster and ashes, and a covering of ensilage without further cultivation. It is remarkable that the other applications of barn-yard manures gave such poor results, as it is but fair to infer from the failure of the lime to afford any increase in the yield that the soil was deficient in organic matters. But without stopping to discuss further the results of this year's experiments it will be better to notice the averages for the last two years. These are given in Table P.

TABLE P.

EXPERIMENTS OF SECTION XVIII FOR 1881 AND 1882.

TREATMENT OF MANURES.	Amount of Manure pr. Acre.	Yield of Grain per Acre.		
		1881. bus.	1882. bus.	Average bus.
Fresh barn-yard manure spread as top-dressing	16 tons.	26.7	57.1	41.9
Rotted barnyard manure spread as top-dressing	16 tons.	24.7	48.0	36.3
Rotted barnyard manure ploughed under.....	16 tons.	17.1	72.0	44.5
Fresh barnyard manure ploughed under.....	16 tons.	14.6	52.5	33.5
No manure.....	000	10.5	44.3	27.4
Bone meal.....	200 lbs.	11.4	53.7	32.5
Salts of potash*.....	100 lbs.			
Plaster.....	100 lbs.			
Sulphate of ammonia.....	200 lbs.	5.7	57.1	31.4
Plaster.....	200 lbs.	4.1	53.7	28.9
Lime.....	80 bus.	24.6	27.4	26.0
Ground limestone.....	400 lbs.	10.5	34.2	22.3
Plaster.....	200 lbs.	20.1	61.9	41.0
Ashes.....	16 bus.			
Bone meal.....	200 lbs.	5.4	42.2	23.8
Ober's ammoniated superphosphate of lime.....	200 lbs.	14.1	36.5	25.3
Baldwin's bone compound†.....	200 lbs.	19.2	29.7	24.4
Refuse ensilage spread as mulch. Crop not worked.....	Fair cov- ering. }	26.0	61.7	43.8
Compost of $\frac{1}{3}$ bone meal, $\frac{1}{3}$ plaster, and $\frac{1}{3}$ muck dropped in hill.....	1 hand- ful to hill }	6.8	53.7	30.2
Corn planted half distance in row.....	—	10.2	54.8	32.5
Corn planted half distance each way.....	—	13.4	29.7	26.5

*Sulphate of Potash in 1881, and Muriate Potash in 1882.

†Baldwin's Ammoniated Dissolved Bone in 1881 and Bone Compound in 1882.

Taking the experiments as they stand in this Table we see, first, that the fresh barn-yard manure gave the best results of any in 1881 and the fourth best in 1882. Its average for the two years is the third best. As compared with the average of the unfertilized plots it shows a gain of 14.5 bushels per acre; and as compared with the same amount of rotted manure applied in the same way it shows a decided gain each year. This is well worthy of attention for the application of fresh manure is much the more economical of the two. The top-dressing of rotted manure gave, however, fair returns each year, and an average increase of the two years of 8.9 bushels. The same amount of rotted manure ploughed under gave very poor returns in 1881, inferior to those of either of the preceding applications, but in 1882 it gave by far the best of any, and its average for the two years is also the best. These results show how

dangerous and misleading it is to draw general conclusions from the experiments of a single year. For, from the experiments of 1881, we should have argued that the best method of using barn-yard manure on corn would be to spread it fresh from the stall or yard as a top-dressing after planting; from those of 1882, that it should be fermented and ploughed under before planting. The fresh manure ploughed under gave in 1881 the poorest returns of any of the four applications, in 1882 it gave a much larger increase and proved superior to rotted manure spread as a top-dressing. Its average for the two years shows a gain of 6.1 bushels per acre. These experiments must be continued for some years longer before it will be safe to decide as to the best form and manner of applying barn-yard manure on corn. The mixture of bone meal, salts of potash and plaster was of but slight advantage to the crop in 1881—in 1882 it afforded a somewhat larger increase. Its average increase is, however, only 5.1 bushels, a very small gain. The sulphate of ammonia was apparently injurious to the crop in 1881—in 1882 it gave the fourth largest increase. Its average shows very slight gains, not sufficient to pay for the cost of the application. The average yields of the plaster, the lime, the ground limestone, the bone meal, the Ober and the Baldwin show no increase as compared with the unmanured plats. The mixture of plaster and ashes shows a very decided increase each year. In 1881 it was the fifth best, in 1882 the second best. Its average for the two years is the fourth best, and superior to that of 16 tons of rotted barn-yard manure spread as a top-dressing, and 16 tons of fresh barn-yard manure ploughed under. It is of course a much cheaper application, and one always at the farmer's command. A covering of ensilage gave the second best results in 1881 and the third best in 1882, and its average is the second best and very nearly equal to that of the best—16 tons of rotted manure ploughed under. There can be no comparison as to the cost of the two last applications, if we take into consideration that the mulching of ensilage saved the cost of cultivation. The corn on the other plats was cultivated three times. These results of this experiment are certainly very favorable to mulchings of rotted straw, leaves, or other forms of decaying organic matters. The compost of bone meal, plaster and muck shows a slight average increase. Thicker planting in the row was without effect in 1881, in 1882 it gave a

moderate increase, and there is an average gain of 5.1 bushels. Thicker planting both in the hill and row gave no average increase.

It appears from the experiments that the barn-yard manures and home-made composts gave the best results, and that commercial fertilizers were of no benefit to the crop. I have experimented largely with commercial fertilizers and have never had one to give me paying results in corn. This remark, of course, applies only to the soils upon which I experimented.

SECTION XIX.

Experiments with Other Crops.

This Section includes experiments with Dhurra, Sorghum, Upland Rice, Silver Hull Buckwheat, Soja Hispida, Teosinte, Millo Maize, etc. For the history of all these plants, except the last, reference must be had to last year's report.

DHURRA.

It is unnecessary to enter into a detailed discussion of these experiments. Two plantings were made, one in the spring, the other in July on oat-stubble. Both crops gave fair yields, and the results fully confirmed the favorable experience of the two preceding years. All the grain of last year's crop was fed to the stock last winter. It was relished by them and was fully equal in feeding value to Indian Corn. The plant is a valuable acquisition, and I have no hesitation in repeating the advice offered last year: "Every farmer should protect himself from the effects of drought by planting at least a few acres in this cereal."

SORGHUM.

Four varieties of Sorghum were tested; Honduras, Early Amber, Early Orange and Kansas Orange. An account was given in the Report of 1881 of all these varieties except the last. Isaac Hedges, of Missouri, the great apostle of Sorghum, who kindly sent me all the above-named varieties, writes that the Kansas Orange is a new variety sent him last season from Kansas. We grew these sorts simply for their forage—as the crop was cut for ensilage when it was just out of bloom. The land had been in wheat two years, and when prepared for planting received 150lbs. of a good

commercial fertilizer along with the Sorghum seed. The Honduras promised much the heaviest yield until about two weeks before it was cut, when all the lower leaves were suddenly blasted. We were not able to discover the cause. The other varieties were not similarly affected, and there were no differences of soil, exposure, etc., to which it could be attributed. All the plats received the same treatment. The piece of land was irregularly divided up into four plats. 1.46 acres were planted in Kansas Orange, 1.03 in Early Orange, 0.90 in Honduras, and 0.59 in Early Amber.

The whole piece of 4 acres gave 105,407lbs. of green forage, or an average of 26,351lbs. per acre. The yields per acre of the several varieties are given in Table XIX.

TABLE XIX.

EXPERIMENTS TESTING VARIETIES OF SORGHUM.

Planted in Spring (May). Cut in August.

VARIETY.	Yield of Green For- age per Acre.
Early Orange	31,328 lbs.
Early Amber.....	28,018 "
Kansas Orange	24,586 "
Red Honduras.....	22,470 "

The season was favorable, and hence the crop was a very fair one—greatly superior to that of last year. The Early Orange gave the largest yield, the Honduras the smallest—between the two there was a difference of nearly 9,000lbs. But for the injury spoken of above the Honduras would have given the heaviest yield. As all these kinds, except the Kansas Orange, were tested last year, it will be well to compare the results for the two years. These are given in Table Q.

TABLE Q.

TESTS OF SORGHUM OF 1881 AND 1882 COMPARED.

VARIETY.	Yield of Green Forage per Acre.		
	1881. Pounds.	1882. Pounds.	Average. Pounds.
Early Orange.....	7,916	31,328	19,622
Red Honduras.....	11,886	22,470	17,178
Early Amber.....	4,138	28,018	16,078

It will be observed that the Honduras, which gave the best yield in 1881, gave the worst in 1882. The Early Orange shows the best average. The season of 1881 was terribly dry, and the crop was cut greatly short, but that of 1882 was very favorable. Any one estimating the crop of 1882 standing in the field would have put its yield at 25 tons per acre, and yet it only averaged about 13 tons. I believe that 15 tons per acre is a very fair average crop and all that we can reasonably expect. And yet we hear of estimated yields of 30, 60 and 80 tons. The Sorghum ensilage was of excellent quality and was greatly relished by stock of all kinds.

UPLAND RICE.

A small quantity of seed was drilled in, in rows 3 feet apart, in the spring, and well worked throughout the season. The crop, like those of the preceding years, was a failure.

SILVER HULL BUCKWHEAT.

A peck of this variety was sown broadcast on land of excellent quality in June. Along side a peck of common buckwheat was sown in the same way. No difference was perceptible in the growth of the two kinds throughout the season. Both crops were almost failures.

SOJA HISPIDA.

Seed of our own raising was sown in the manner described in last year's report and gave a fair crop. A small quantity of seed kindly sent me by the Hon. Edward Atkinson, of Boston, who imported it directly from China, was drilled in on a different piece of land. It grows much more vigorously than the other and gave a much larger yield. The crop was quite a good one. The plant is one of decided promise.

TEOSINTE.

A small quantity of seed was planted in hills 5 feet apart each way. The plants came up freely and their growth was remarkably slow. In fact, our experience with this crop was the same this year as last. For months it is, apparently, at a standstill—only a few inches high. Towards Fall it begins to tiller and about October to shoot preparatory to blooming. It is invariably overtaken by frost. It will not mature its seed in our climate—in fact, it has never flowered in the open air with us. It is a tropical plant and not suited to this region. On remarkably rich soils it might be pushed forward rapidly enough to give a fair crop of forage late in the fall; but a forage plant occupying the ground from April to October and affording only one cutting is, certainly, not a desirable acquisition.

MILLO MAIZE.

This is a variety of the *Sorghum Vulgare* and resembles several of our common Sorghums and also the Dhurra. It differs however, from the latter in its more open and erect head and its tendency to tiller from the root. The grain is whiter and the chaff is different. It is, in my opinion, greatly inferior to the Dhurra in rapidity of growth. It was brought from Brazil by the Rev. Mr. Pratt, of South Carolina, who kindly sent me a small quantity of seed for experimental purpose. I saw in South Carolina a crop planted early in May which was not mature in October. It retains its tropical habit. It produces, however, a large amount of forage. Planted on the farm early in June, it failed to mature before frost. Dhurra on the other hand, planted in April, was harvested early in August, and planted in July was ripe early in October. Like all the other Sorghums the Millo Maize is remarkable for its drought-resisting powers. When acclimated, if it can be, it may prove of some value as a forage and grain producing plant.

OATS.

All the experiments of Series IV, Sections XIII and XIV, were repeated this year, but were, in consequence of the ravages of the rust, more or less failures, so much so that no account was taken of the yields. But a few notes made during the season are possessed of decided interest. For a detailed description of the experiments, the reader is referred to the report of 1881.

The Washington Oats were utterly destroyed by the rust. Early in the season they made a large and vigorous growth, but immediately after heading out the straw began to break down, and they were soon laid flat. They were not cut. The Gaines' Winter, a seed oat sent out by the Department at Washington, and Pringle's Excelsior Hybrid Hulless fared no better. The common Hulless was badly damaged, part of the straw breaking down. It was cut, however, and a part threshed but the grain was shriveled and worthless. The rust-proof was not so seriously damaged and made about one-fourth of a crop. The grain was light and very inferior.

The fertilized portions of each variety showed no difference in favor of the fertilizers. No difference in growth was perceptible, nor in maturity, and they were as much damaged by rust as the others. The fertilizers were apparently without effect on the crop.

RURAL BRANCHING SORGHUM.

A small quantity of seed sent out by the able and energetic editor of the *Rural New Yorker* was planted early in June. It was allowed to mature its seed. The row, 200 feet long, gave us 4 bushels of seed, a good yield.

IRISH POTATOES.

A few experiments were made for the purpose of testing the relative earliness of different varieties of Irish Potatoes. The Holsten Rose, Beauty of Hebron, Early Rose and White Elephant, were planted side by side, in good soil, early in the spring.

The Holston Rose came in 8 days before any of the others, the Beauty of Hebron from seed of our own raising came next, then seed of this variety sent out by the Department came in 10 days later still. The Early Rose came in between the two last. The White Elephant came in toward the last. It is strictly speaking neither an early nor late potato with us. It was only of medium size and quality.

EXPERIMENTS WITH ENSILAGE.

SERIES VI.

This Series was devoted entirely to experiments bearing upon different questions connected with ensilage. This subject was treated at great length in my two preceding reports. To make this discussion more complete I now offer for the information of the farmers of the State a short historical account of the process.

THE HISTORY OF ENSILAGE.

Ensilage, a word of comparatively recent coinage, is a term applied, first, to a so-called new process of preserving green forage in pits, and second, to the product of the process. It is compounded of the two French words *en*, in, and *silo* a pit for the preservation of grain, roots, etc. "The ensilage of maize" is, therefore, in plain English, the process of "pitting" green corn fodder, and "corn ensilage" is "pitted corn," or the corn forage preserved by the process. The foreign derivation of the word is well calculated to prejudiced the minds of our farmers against the process. It is hotly disputed as to whom the honor of originating it rightly belongs. Goffart, a French farmer, claims to have practically tested it on a large scale as far back as 1852, and to have perfected it by his subsequent experiments. He does not scruple to apply to his achievements the much abused line of Horace, "*Exegi monumentum ære perennius.*" In a gathering of enthusiastic American admirers, held in New York a few months ago, a resolution was introduced urging the importance of perpetuating his fame by the erection of a "monument" of a somewhat less enduring character, but cheaper material, than brass. Mr. Francis D. Moulton, another warm advocate of the process, roundly affirms that "to an American (Mr. C. W. Mills, of New Jersey,) will belong the honor and fame of

having perfected the system of ensilage in his discovery of the value of uniform continuous pressure and the method of applying it."

Such prejudices can be best removed and such disputes most easily settled, by a hasty glance at the true history of the process.

The French "*Silo*" is the same word as the Latin dative *siro* and the Greek dative *siro*, the substitution of *l* for *r* being a common etymological change. The word can be traced back to the Persian. In all these languages its meaning is the same, an underground excavation or pit, used for the storage of grain and other farm products.

Columella, a Latin writer of the first century, speaks of grain being kept in pits as, "in certain transmarine provinces, where the ground hollowed out into excavations resembling wells, which are called *siros*, receives back its own produce." (Lib. I, Cap. VI. 15.)

Varro, another Roman author of still earlier date, mentions these *siros*, and states that "they were in use in Cappadocia and Thrace, and also formerly in Spain and around Carthage." "Their bottoms," he says, "were covered with straw and every precaution taken to prevent the access of moisture and air to the grain until it was brought out for use, for it was held that the weevil would not breed where the air was excluded." He adds that wheat thus stored away kept fifty years and millet upwards of one hundred. (Lib. I, Cap. LVII.)

Pliny, the naturalist, who perished in an eruption of Mount Vesuvius, A. D. 79, after referring to different methods of preserving grain, goes on to remark: "They (corns) keep well stored away in the ear, but they are best preserved in trenches which they call *siros*, as in Cappadocia and Thrace, and Spain, and part of Africa. They are very careful to build them in a dry soil—they next strew them with straw and store away the grains in them in the ear. If no air penetrates the grains thus stored away, it is certain that they continue uninjured. Varro is authority for saying that wheat thus buried keeps fifty years, and millet even one hundred, and that the bean and pulse are preserved for a long time in olive oil casks smeared with ashes, and that the bean remained sound in a certain cave of Ambracia from the age of King Pyrrhus even down to the piratical war of Pompey the Great, a period of 220 years." (Natural History, Lib. XVIII, Cap. 30.)

A year or so ago an article appeared in an agricultural paper

warning farmers against incautiously descending in the morning into a partly filled silo. The writer observed that "the carbonic acid, produced during the process of filling, collects over night," and went on to state that "a laborer near Sing Sing, New York, came near losing his life by going down in the morning into one half filled." After reading this it seems strange to learn from Varro, in the days when Priestly and oxygen were not, that "whenever they opened the siros they waited for some time before descending into them for fear of the noxious air collected therein." Lib. I, Cap. LXIII.

Diodorus says that the Britons laid up their corn in the ear, and preserved it in subterranean pits from which the damp and air were carefully excluded. Tacitus, also, in his *De Germania*, informs us that "the Germans were in the habit of making subterranean excavations, which they covered on the outside with thick layers of dung," and that they used these as places of shelter in winter and "as receptacles for their crops, because they lessened the severity of the cold and saved their stores from spoliation." (Chap. 16).

A WRITER ON CELTIC ANTIQUITIES

states that "subterranean buildings, of rude but substantial formation, are found throughout Scotland," and that "there is every reason to believe that these were places where the grain of the inhabitants was deposited for security. It should be mentioned in this connection that Virtruvius, a writer on architecture in the days of Augustus, mentions in Lib. VI, Cap. 5, among other buildings used for the preservation of farm produce, (*fructibus rusticis*) vaults of pits in houses, (*in ædibus cryptæ*). Philander, commenting on this passage, interprets *cryptæ* as "vaulted subterranean ditches or excavated places, and trenches where grain is stored away," and compares them with the *siros* mentioned in Varro.

It would appear, then, that the process of ensilage or *ensilage* can lay claims to a very respectable antiquity and that it was very probably used for preserving green forage as well as grain, for the small amount of carbonic acid given off by "uninjured grain" would not have attracted the attention of the husbandman. This supposition is greatly strengthened by a passage in Curtius, a Latin historian of the first century. He states in Chapter IV, of his 7th book, that the troops of Alexander, after crossing the Caucasus, were

subjected to severe privations—that there was “a scarcity of corn, amounting almost to a famine,” and that “no wheat could be found.” He then abruptly adds: “The barbarians around Caucasus call these *siros*, which they conceal so ingeniously that none save those who dig them are able to find them; in these their *crops* are stored away.”

Now the word *fruges*, which occurs in this passage, and also in the one from Tacitus quoted above, is a much broader term than *frumentum*, the word used by Varro and Pliny, and *fructus*, the one employed by Colummella. The classical writers (Varro, for example, in Liber IV of his *De Lingua Latina*) carefully distinguish between these terms. According to the best authorities, *frumentum* signifies “grain,” (halm fruit,) while *fructus* denotes more particularly “tree fruit,” and *fruges* the “fruits of the earth,” or the “produce of the field,” etc.

Again Ausonius Popma, an accurate grammarian and scholar of the sixteenth century, in his treatise on Farm Implements, (*De Instrumento Fundi*) a work which treats of the instruments of ancient husbandry, in referring to the subject of granaries and citing authorities, appears to use the term *fruges* advisedly. In Chapter XV he writes: “Instead of these, (granaries above ground) in some provinces *siros* are used, excavated after the manner of caves or wells, for receiving and preserving the crops.”

I think it may be safely affirmed that the passages above quoted make it abundantly evident that grain and other farm products were in the earliest times stored away in underground excavations, in order to protect them from the ravages of war, and that the perfect preservation of the crops thus saved caused the practice to be generally adopted and continued in more peaceful times.

In proceeding, next, to glance at

THE MODERN HISTORY OF ENSILAGE,

it should be first remarked that the writings of Popma (quoted above) and other scholars and grammarians show that the knowledge of this process was preserved during the middle ages. For example, Casaubon, a French critic born in 1559, in commenting upon the Greek *siros*, describes it as a small pit excavated for a granary or storehouse. Hesychius of Alexandria (A. D. 300) interprets the same word as a wine vat, (pithon) “because other things besides wine are preserved in wine jars.” Freinheim, born in 1608, and

professor at Heidelberg, not only refers to the *siro*, but declares that "in his time it was in common use in Hungary for preserving wine and grain."

The word *silo* was known to French husbandry long before the days of Goffart. It is frequently mentioned by LeConteux, (See *Traite Elementaire de l' Agriculture du Department de la Seine, Paris, 1840, page 67,*) Casanova, (*Les Premiers Pasdans l' Agriculture, page 112,*) and other writers. The process has been long used in Spain for preserving maize and even the leaves of trees and vines. A writer stated in 1875, that it had been employed in Austro-Hungary for seventy years and for ten years in Germany, "but in a less elaborate form than in France." Grieswald, in 1842, gave a detailed description of the East Prussian method of preserving grass, and the passage is translated in Stephen's large work *The Farmer's Guide* published in 1851, the year before Goffart began his experiments. The process as therein described is almost identical with the one perfected by the Frenchman Goffart and his friends assert, however, that he was the first to employ the process for the preservation of maize or Indian corn.

In opposition to such claims it is distinctly stated that the proprietor of a beet-sugar manufactory near Stuttgart, M. Adolph Reihlen, was the first who applied the process, which he had previously employed with success for the preservation of sugar-beet-pulp, "to a very large crop of maize, fallen unexpectedly to him." Goffart has, however, certainly done much, perhaps more than any other man, to develop and perfect the "ensilage of maize," and his merits have been generally recognized in his own country. He has received the decoration of the Legion of Honor, and his true claims to fame have been well set forth in a report of a committee appointed by the Central Agricultural Society of France: "The world is so old, necessity has so long compelled the efforts of human beings, that we find precedents in every line of improvement. But all experienced men who know the great difference which separates a happy suggestion, or even a successful attempt, from a practice well enough confirmed to become the basis of a regular business, will admit that these precedents do not destroy the merit of any man who, like Monsieur A. Goffart, has accomplished a continued success.

It is generally believed that Col. Francis Morris, of Oakland

Manor, Howard county, Maryland, was the first farmer who tried the process in this country. His silos were built in the summer of 1876.

Our experiments with ensilage were as successful this season as in any of the preceding years. We put up about 250,000lbs. Indian corn, sorghum and dhurra, filling both of our silos. The ensilage was of most excellent quality, and every pound of it was eaten by the farm stock.

The experiments of last year afford the data for determining the loss of weight due to the process. Silo No. 3, of last year, was filled in October and opened early in January. The ensilage was well preserved. The last was fed out late in March. Every pound was weighed before it was offered to the cattle. 66,630lbs. of green forage was put into the silo and 52,890lbs. of ensilage was taken from it. This shows a loss of 13,740lbs, or 20.62 per cent. This loss was doubtless increased by the length of time the silo stood open, nearly three months, and is, perhaps, greater than what would occur in general farm practice. It would appear from these figures that a farmer can reasonably expect to get 1,600lbs. of ensilage from every ton of green matter. Samples of the different kinds of ensilage—corn, clover, sorghum, etc.—were carefully taken and handed to the Professor of Chemistry for analysis. The following determinations were made by the Adjunct Professor of Chemistry :

ANALYSES OF ENSILAGE BY PROF. W. E. MOSES.

I. Clover. II. New Corn. III. Old Corn. IV. Sorghum.

	INCLUDING WATER.				AFTER DRYING AT 100° C.			
	I.	II.	III.	IV.	I.	II.	III.	IV.
Loss at 100° C., (Water)	50.80	78.81	78.77	82.85				
Albuminoids, (Nitrogen X 6.25.).....	5.25	2.24	2.45	1.86	10.66	10.39	11.53	10.86
Fat, (Ether Extract,)...	1.66	.89	.92	.77	3.38	4.21	4.33	4.50
Cellulose, (Crude).....	12.96	4.15	4.84	3.82	26.25	19.58	22.81	22.30
Ash.....	3.83	1.32	1.27	1.39	7.78	6.24	6.00	8.13
Carbohydrates, (Nitrogen free extract,).....	25.50	12.59	11.75	9.31	51.93	59.58	55.33	54.21
	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

It will be observed that the clover ensilage shows but little over 50 per cent. of water, and that it contains 5.25 per cent. of albuminoids. There is but little difference in the analyses of the corn
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cut young (while tasseling) and in the silk state. The sorghum shows the highest percentage of water and the lowest of albuminoids and other valuable matters. It was cut very young, before it was well headed out.

SECTION XX.

Experiments Testing Forage Crops.

A field of about eight acres which had been in wheat the two preceding years, was broken up in the fall and reploughed in the spring, and thoroughly ordered for planting. It was then divided into two very nearly equal parts, one of which was planted in the common gourd seed of the country, and the other subdivided into four portions for sorghum, in the manner described in the preceding section. All the plantings were made at the same time—early in May. The corn received the same amount of the same fertilizer as the sorghum. It was planted in rows four feet apart, and about two or three inches apart in the drill. All the plats received the same cultivation. The yields of the varieties of sorghum have already been given, but for ready comparison, they are again given, along with that of the corn, in the following table:

TABLE XX.

EXPERIMENTS TESTING FORAGE CROPS.

Planted early in May. Cut in August.

KIND OF CROP.	Yield of Green Forage per Acre. Pounds.
Early Orange Sorghum.....	31,328
Early Amber Sorghum.....	28,018
Indian Corn.....	27,445
Kansas Orange Sorghum.....	24,586
Red Honduras Sorghum.....	22,470

About four acres (more accurately speaking, 3.973 acres) were in corn, and the yield was 109,040lbs., or an average of 27,445lbs. per acre. It will be remembered that the sorghum averaged 28,351lbs. per acre. The corn stands third in the Table. The season was very favorable. In good years the corn will give equally as heavy

crops as the sorghum, and the preceding analyses show that it is decidedly superior in feeding value. But in dry years the sorghum will give much better results. This will appear on comparing the results of the experiments of 1881 and 1882. These are given in the following Table:

TABLE R.

EXPERIMENTS OF SECTION XX FOR 1881 AND 1882 COMPARED.

KIND OF CROP.	Yield of Green Forage per Acre.		
	1881. Pounds.	1882. Pounds.	Average. Pounds.
Early Orange Sorghum.....	7,916	31,328	19,622
Red Honduras Sorghum.....	11,886	22,470	17,178
Indian Corn (Gourd Seed).....	6,327	27,445	16,886
Early Amber Sorghum.....	4,138	28,018	16,078

Last year the drought terribly injured the corn. It was dry and wilted when out. The sorghums, on the other hand, were green and fresh. We were compelled to cut them green in order to close up the silo. The Honduras gave almost double the yield of the corn.

After removing the heads of the dhurra, the stalks were cut for ensilage. It proved of excellent quality, and was readily eaten by the animals. The sorghums can be treated in the same way, as the stalks and leaves are perfectly green when the grain is ripe enough to harvest.

SECTION XXI.

Experiments Testing the Feeding Value of Ensilage.

The results of last year's experiments showed that in mixed rations, two pounds of ensilage would fairly replace one pound of hay. The most important of these experiments were carefully repeated during the past winter, and their results fully confirm those of last year. They are set forth in the following Table:

TABLE XXI.

EXPERIMENTS TESTING FEEDING VALUE OF ENSILAGE.

No. of Animal.	DAILY RATION FOR 1,000 LBS. OF LIVE WEIGHT	Weight Feb. 1st.	Weight Feb. 28th.	Gain for month.	Gain per day.	Gain per cent.
	(1.) LONG FORAGE.	lbs.	lbs.	lbs.	lbs.	lbs.
10	20 lbs. of good Meadow Hay.....	428	450	22	0.78	5.1
9	10 lbs. Hay and 20 lbs. Ensilage (Corn).....	457	485	28	1.00	6.1
12	40 lbs. Ensilage.....	422	480	38	1.35	8.6
	(2.) HAY AND DIFFERENT MEALS.					
4	20 lbs. Hay and 6 lbs. Cotton-seed Meal.....	770	840	70	2.50	9.1
5	20 lbs. Hay and 6 lbs. Corn Meal.....	800	850	50	1.78	6.2
6	20 lbs. Hay and 6 lbs. Dhurra Meal.....	715	770	55	1.96	7.7
	(3) ENSILAGE AND DIFFERENT MEALS.					
1	40 lbs. Ensilage and 6 lbs. Cotton-seed Meal....	1,175	1,240	65	2.32	5.5
2	40 lbs. Ensilage and 6 lbs. Corn Meal.....	1,150	1,227	77	2.75	6.7
3	40 lbs. Ensilage and 6 lbs. Dhurra Meal.....	1,040	1,110	70	2.50	6.7

It should be premised that the animals experimented with this winter were not the same as those fed last year; and, also, that all were fed for about a month previous to the commencement of the tests on a mixed ration of hay and ensilage. Two pounds of corn ensilage were fed against one pound of hay. The tests continued through the month of February. The winter was much milder than the preceding one. In order to allow of easy comparison, the amounts actually fed to each animal are not given, but simply the daily ration for every 1,000lbs. of live weight.

Three animals, all yearling steers, were fed exclusively on long forage. No. 10, weighing 428lbs., received 20lbs of hay (per 1,000lbs. live weight), and gained 22lbs., or 0.78lbs. per day, a gain of 5.1 per cent. No. 9, weighing 457lbs., received 10lbs. of hay and 20lbs. of corn ensilage, and gained 28lbs. or 1.00lb. per day, a gain of 6.1 per cent. No. 12, weighing 442lbs., received 40lbs. of ensilage, and gained 38lbs., or 1.35lbs., a gain of 8.6 per cent. It is evident that in these three tests 2lbs. of ensilage gave better results than 1lb. of hay. No. 12 shows almost double the daily gain of No. 10.

Three two-year-old steers were fed on mixed rations of hay and meal. No. 4, weighing 770lbs., received 20lbs. of hay and 6lbs. of

cotton-seed meal, and gained 70lbs. or 2.50lbs. a day, a gain of 9.1 per cent. No. 5, weighing 800lbs., was fed the same amount of the same hay and 6lbs. of corn meal, and gained 50lbs., or 1.78lbs. a day, a gain of 6.2 per cent. No. 6, weighing 715lbs., was allowed the same amount of hay and 6lbs. of dhurra meal, and gained 55lbs., or 1.96lbs. a day, a gain of 7.7 per cent.

Three three-year-old steers were fed on ensilage and the same meals. No. 1, weighing 1,175lbs., received 40lbs. corn ensilage and 6lbs. cotton-seed meal, and gained 45lbs., or 2.32lbs. a day, a gain of 5.5 per cent. No. 2, weighing 1,150lbs., received the same quantity of ensilage and 6lbs. corn meal, and gained 77lbs., or 1.96lbs. a day, a gain of 6.7 per cent. No. 3, weighing 1,040lbs., received the same quantity of ensilage and 6lbs. of dhurra meal, and gained 70lbs., or 2.50lbs. a day, a gain of 6.7 per cent.

On comparing the results of the last two sets of tests it is seen, first, that No. 4, fed on 20lbs. of hay and 6lbs. of cotton-seed meal, gained 5lbs. more than No. 1, fed on 40lbs. of ensilage and the same quantity of the same meal; but that No. 2, fed on corn meal and ensilage, gained 27lbs. more than No. 5, fed on the same meal and hay, and that No. 3, fed on dhurra meal and ensilage, gained 15lbs. more than No. 6, fed on the same meal and hay. In two out of the three tests the results were in favor of the ensilage. The per cent. gains of the two-year animals cannot be fairly compared with those of the three-year-old. Second, when fed with hay, cotton-seed shows the largest gains of the three meals, and the worst with ensilage. The dhurra with the hay gave better results than the corn meal, and with the ensilage it shows the same per cent. gain. (In animals of the same age it is allowable to compare the per cent. gains).

Corn meal and ensilage show the largest daily gain of any ration tested. In the foregoing tests it cannot be questioned that 2lbs. of ensilage was fully equal in feeding value to 1lb. of hay.

These tests show, also, that dhurra has about the same nutritive value as Indian corn.

From March 1st to 15th the last six animals were allowed 50lbs. of ensilage and 6lbs. of cotton-seed meal a day, for every 1,000lbs. of live weight, it being our purpose to push them for market. The weights taken on the latter date (15th) show a gain for No. 4 of 70lbs. in the two weeks; for No. 5, of 50lbs.; for No. 6, of 55lbs.;

for No. 1, of 45lbs.; for No. 2, of 20lbs., and for No. 3, of 30lbs. On comparing the effects of a change of rations on Nos. 4, 5 and 6, the noteworthy fact appears that in the case of each animal 50lbs. of ensilage and 6lbs. of meal gave in two weeks the same gain that 20lbs. of hay and the same quantity of meal gave in double the number of days (28), No. 4 gaining in each test 70lbs.; No. 5, 50lbs., and No. 6, 55lbs. On March 15th, our supply of ensilage being nearly exhausted, 12½lbs. of hay were substituted for 25lbs. of the ensilage, and for a week each animal received a daily ration of 25lbs. of ensilage, 12½lbs. of hay, and 6lbs. of cotton-seed meal. The change was made for the purpose of preparing the animals for a ration of hay and meal. The weights taken on the 22d show, when compared with those of the preceding two weeks, that the change had in the seven days injuriously affected all the animals except No. 2. This animal made a gain of 15lbs., but No. 1 gained only 5lbs.; No. 3, 10lbs., No. 4, 7lbs., and Nos. 5 and 6, each 20lbs. From March 22d to April 13th, each animal received daily 25lbs. of hay and 6lbs. of cotton-seed meal. The weights of the animals on March 22d were as follows: No. 1, 1,290lbs.; No. 2, 1,262lbs.; No. 3, 1,150lbs.; No. 4, 917lbs.; No. 5, 920lbs.; No. 6, 845lbs. The same animals on April 13th, weighed respectively 1,280lbs., 1,237lbs., 1,155lbs., 947lbs., 940lbs., and 835lbs. It appears, therefore, that in nineteen days, No. 1 lost 10lbs.; No. 2, 25lbs., and No. 6, 10lbs.; and that No. 4 gained 30lbs.; No. 5, 20lbs., and No. 3, 5lbs. Compared with the rapid gains of the preceding period these figures are significant.

To sum up, I again repeat, that these experiments, carefully conducted and long continued, and agreeing so closely with those of last year, show that mixed with nitrogenous matters, 2lbs. of ensilage are fully equal in feeding value to 1lb. of hay.

Ensilage should neither be condemned nor approved of on purely theoretical grounds. These experiments, while they do not support the extravagant claims of those who hold that the process is one which bids fair to revolutionize the agricultural world, and that its product is an all-sufficient and perfect food, certainly show that it is well deserving of further trial by practical farmers.

CONCLUSION.

The foregoing report closes the account of my experimental work for the year 1882. It is the last I will have the honor and pleasure of submitting to the farmers of Tennessee. I take leave of them with exceeding regret, but cheered by the conviction that this work is left in such able and competent hands as those of my successor, Prof. J. W. Glenn.

J. M. McBRYDE.

FARM STOCK, IMPLEMENTS, ETC.

The Cattle and Hogs on the University Farm.

From each of the popular breeds of cattle—the Jerseys, the Short-horns and the Devons—we have several representatives of the best strains. Our hogs consist mainly of Berkshires, Poland-Chinas and Jersey-Reds. Of the stock now on the farm, several are worthy of particular mention.

PITAPAT, Jersey, calved February 29th, 1880. Bred by Campbell Brown, Esq., of Spring Hill, Maury county. Out of Ximena, by imported Tormentor. Mr. T. S. Cooper, of Pennsylvania, writes to Mr. Brown, under date of May 24, 1881, as follows: "Allow me to congratulate you on being the fortunate owner of so good a bull as Tormentor. I spent a long time on the Island last month, and I did see some grand things sired by him ;

so good that I paid £210 (\$1,050) for one of them. It is a two-year old heifer, and out of Mr. Arthur's old Rose. I also paid other long prices for other females sired by him." Ximena, at three years old, had a butter record of 12½lbs. per week. Pitapat was bred to Lord Harry, and dropped her first calf (a bull) at the Farm on October 26, 1881. Lord Harry is by Top-Sawyer, and out of Duchess of Bloomfield (record 18lbs. 1oz. butter per week). The second calf of Pitapat is female, and is by Phœbus of River-view mentioned below.

This calf, CLYTIE OF RIVERVIEW, was dropped on the 5th of November, 1882.

PHÆBUS OF RIVERVIEW, Jersey bull calf, bred by Campbell Brown, Esq., and presented by him to the University. Calved April 14, 1881. By Lord Ducie, out of Dudu of Linwood. This calf combines the blood of Maj. Brown's two best cows, Duchess of Bloomfield and Roxana 2d. In his pedigree are three crosses, which appear twice in that of the famous cow, Jersey Belle of Scituate, whose record of butter was 20lbs. 3oz. per week.

Three Short-horns, bred by Mark S. Cockrill, Esq., of Richland Farm, Nashville.

14TH LADY OF RICHLAND, calved June 6, 1878. Out of 1st Lady of Richland, by Rose of Sharon bull, Alp Arslan (bred by Abraham Renick, of Kentucky). This cow was bred to Poppy's Airdrie, and dropped a heifer calf at the Farm in October, 1881.

16TH LADY OF RICHLAND, calved September 27, 1880. Sired by Poppy's Airdrie (a Rose of Sharon bull, bred by Ab. Renick, of Kentucky) dam the 8th Duke of Thorndale.

11TH DUKE OF RICHLAND, calved December 4, 1880. Sired by 5th Duke of Hillhurst, dam 6th Lady of Richland, by 8th Duke of Thorndale.

All three animals are descendants on the dam side of the famous imported cow, Lady Little. The Duchess blood is too well known to require notice here.

In addition to the above we have the older Short-horns, Noxubie Mary and 2d Goodness of Fairview, from Mr. Cockrill's herd; also a young cow from Noxubie Mary, by the fine bull in Col. Dickinson's herd, and two calves from the 14th and the 15th Ladies of Richland by sires from the best strains.

A young Devon bull, two cows and some high grades add more than a dozen to the herd at Riverview.

The Farm has received marked liberality from both of the distinguished gentlemen named above, whose reputations are ample guarantees for the excellence of the animals from their herds.

The following pigs were acquired by purchase or breeding:

A pair of POLAND-CHINAS, bred by Mr. Will E. Gaines, of Centreville, Kentucky. These animals trace from the best pens of Kentucky and Illinois. Also two pairs of pigs of five months, and three younger pigs, all bred on the Farm.

A pair of JERSEY REDS, from one of the leading breeders of New Jersey, and three pairs of pigs half grown, bred on the Farm.

TWO BERKSHIRES—a sow bred by Col. H. T. Howard, of Loudon county, and a boar bred by Jacob Thomas, of Knox county. Mr. Thomas' stock were purchased of Mr. M. C. Campbell, of Maury county. Both animals trace directly back to the best imported strains.

We have for sale choice young animals of each of the foregoing breeds.

FARM IMPLEMENTS, ETC.

The Champion Grain Drill and the Chattanooga Patent Chilled Plow have both been used by us with much satisfaction.

The Oliver Chilled Plow is very superior, but the points are entirely too costly for the ordinary farmer's purse.

We find Thomas' harrow a good one for many purposes. Our reapers, mowers, plows, cultivators and other implements, while fair, are, probably, not superior to others, and we cannot, therefore, commend them specially to the farmers of Tennessee.

KEIM'S SEED-TESTING APPARATUS.

We have connected with the Agricultural Department a full set of this apparatus in use in the leading seed-control stations of Europe. It was directly imported from Germany, and was obtained through the kind assistance of Dr. A. R. Ledoux, of New York, and Prof. Nobbe, of Tharand, Saxony. It is designed to test the purity and the vitality of agricultural seeds. The necessity of such tests can be better appreciated from the following statements of Nobbe, Johnson, Ledoux and others.

In numerous samples of farm seeds examined by Nobbe, "the percentage of pure seed was found to be only 59." Of this 59 per cent. of pure seed, "only 18 per cent. were capable of germinating." "Three tons of seed, sold as red clover, contained two tons of yellow clover," a cheaper article. "Old seeds were renovated by boiling, dyeing and roasting. Weeds were stained and used to adulterate expensive seeds. English seedsmen sold in 1869 over ten tons of poor turnip seed disguised so as to represent a more valuable article. In Bohemia and elsewhere large factories for the manufacture of seeds from quartz were running, with large warehouses at Hamburg and other commercial centres. The quartz grains, colored to order were selling for \$50 per ton, and were largely used to adulterate clover." "Men, women and children were regularly employed in Bavaria and Austria to collect from the roadside and ditches seeds of weeds and grasses of all kinds. These collections were bought by agents who shipped them to England and elsewhere to be sorted, labeled and sold." "In Saxony, light and inferior kinds of oats are extensively bought by seedmen to adulterate the heavy and prized kinds." Instances of fraud might be multiplied, but these are sufficient. For fuller information see Nobbe's *Lehrbuch der Samenkunde*, Journal of American Agricultural Association (Vol. I., No. 1, page 36), and Report of Connecticut Board of Agriculture, 1876, (page 447).

The Agricultural Department of the University is prepared to make tests of all kinds of farm, garden and flower seeds sold in the markets of the State. Farmers desiring to have such tests made, will, on application to this Department, be furnished with directions for making proper samples, etc.

To the above, from the pen of Prof. McBryde, I would add that I have tested many kinds of seeds with this apparatus and find it a good one, and I also find a large per cent. of our seeds worthless as stated above.

JOHN W. GLENN,
Professor of Horticulture.

TO THE FARMERS AND THE FRIENDS OF AGRICULTURE IN TENNESSEE.

With much diffidence I have undertaken to continue the agricultural work conducted with so much success by Prof. McBryde during the last three years. It is a hard task to follow one who has failed and destroyed public confidence ; it is not much easier to follow one who, by great success, has elevated public expectation to an abnormal point.

People know that it is not common to find two men eminently fitted for the same position. It is even more rare that two successive administrations are both above mediocrity. By this law of chances, the presumption is against me ; but under the rules of equity I ask that judgment be suspended until results shall be reached and just opinions formed.

Those who expect a continuance of the work, exactly as it has been heretofore conducted, will be disappointed. With no possible feeling but profoundest admiration for my predecessor and his labors, I, yet, cannot imitate either, for earnest, honest, hearty work can never be mere imitation.

Many of the same experiments will be made, and processes repeated ; the same conclusions will be sought ; but different paths, no doubt, will be traveled, and the methods will be varied.

The same purpose that moved the former administration will stimulate and direct the activities in the future. The controlling motive will ever be to benefit the agriculture of the country, by suggesting improved means and better methods, by aiding to decide doubtful questions, and by making expensive experiments, which,

oft repeated by many farmers—and many of them resulting in failure—have caused great loss to the country.

It is also our design to develop more care as to the plans, costs and results, of farm work ; and, so soon as the means are in hand, to offer premiums and other stimuli to higher culture and better methods in general, we make no definite promises ; but we greatly desire and earnestly hope that the results of the future will not be less than those of the past. It shall be my purpose to contribute all possible aid to the solution of any problems affecting our farming interests, and to assist in securing the greatest returns to labor and capital in every department.

I shall consider, that, not *simply* a department of the State University has been committed to my care ; but that the Board of Trustees, acting for the farmers of Tennessee, have, in some sense, appointed me to aid in guarding and improving that industry which engages directly more than seventy per cent. of our people.

At the last meeting of the General Assembly of Tennessee, a law was enacted which recognized our Experiment Station as the Experiment Station of the State. It is hoped that, by next year, material aid will come from this action ; so that the work of the Station may be extended and improved. This Station has not yet been in existence long enough to make conclusions perfectly satisfactory ; but some important results are coming into view. Other facts of the utmost value to the farmers are indicated so significantly in the reports already issued, as to decidedly encourage lines of conduct in one direction, and discourage in the other.

Much has been done, also, in furnishing superior strains and grades of stock at very reduced prices.

At every point the very strongest evidence is presented that the farmers' interests have been most prominent in shaping the entire policy of the Station.

It is hoped that the experiments now progressing (not less than one hundred and fifty in wheat and oats alone) will lend material aid in deciding many doubtful questions ; the attempts to solve which have already cost the farmers of Tennessee thousands of dollars.

The value of ensilage combined with other food is no longer questioned ; but the proper proportions in the combination and the best modes of using it, have not been determined.

The same may be said of cotton seed meal, oil-cake, cane seed and durrha. Some facts connected with these subjects have been noted during the passing season. These facts and others will be reported at the proper time.

The University, aided by other friends of agriculture, has recently secured the enactment of a law to aid and protect farmers in the purchase and use of commercial fertilizers. The law requires that all packages or parcels of such fertilizers shall set forth distinctly the analysis, age, etc., of the fertilizer before it can be sold; and the law, also, forbids the sale of all compounds below a certain grade.

When complaints shall come to us, or when it shall be reasonably suspected that the fertilizers sold are not so good as represented, the analysis will be made at the Experiment Station, and reported back to the complainant, or to the Commissioner of Agriculture, under the rules made by said Commissioner and the Board of Control.

One favor is especially asked of the public. By law the Experiment Station is placed under a Board of Control composed of gentlemen carefully chosen, and well qualified for the position. These gentlemen prescribe the rules and shape the general policy at the Station. It is impossible that any general plans can be developed to complete success or failure in one, two, or even three years.

It is asked, therefore, in strict justice, that reasonable time be allowed, and results be patiently awaited before hasty objections be raised.

Such objections to a new enterprise like this may not only obstruct its progress, but may entirely defeat its purposes. Some fixed policy must be pursued for a given time, and modifications cannot be made to incorporate the peculiar views of every one during the same period.

Let, then, one system be fairly tested before another is demanded.

Under the general limitations which may be fixed by the Board of Control, and which, I believe, will be wisely located and well worthy of a fair trial, I propose to make the Station really "experimental" in the fullest meaning. I may not be able in one year to test all the suggestions which may be made by farmers; and I cannot agree to conform my plans to the wishes of any one; but I do propose that all reasonable experiments shall be made, and all

methods, promising fair results, shall in time, be tested. I therefore ask for suggestions and the freest consultations.

Feeling profoundly the responsibility of my position, and being fully convinced that without your assistance, all my efforts will be fruitless, I earnestly beg that, while waiting patiently for results, you grant to me that sympathy and co-operation which you so generously accorded to my predecessor.

Most respectfully,

JOHN W. GLENN,

Professor Agr., Hort. and Bot., and Director Exp't Station.

BULLETIN NO. 1.

ANALYSES AND TESTS

—OF—

Manures and Fertilizers

—FOR—

1883-84.

TO THE FARMERS OF TENNESSEE.

At their semi-annual meeting, last February, the Board of Trustees of the University of Tennessee, authorized the Agricultural Department to publish, each year, several minor reports in the form of bulletins and a more extended and elaborate biennial report.

In accordance with this authority, the Board of Control have ordered the issue of this, the first bulletin for 1884.

In the large Biennial Report the experiments will be given in detail and will be extensively discussed, as heretofore. Such a report will probably be issued about the end of this year.

It is the design of the bulletins to furnish farmers with concise, general statements of results so soon as practicable after experiments have been made.

In these brief reports it will not be possible to publish any extended discussions. Even facts must be stated briefly, and farmers must be left to make their own comparisons and conclusions until the more elaborate reports are issued.

It is thought that this plan of presenting but one or two subjects in the same paper and giving them in a manner clear, brief and simple, will prove more satisfactory to farmers than calling their attention to such a variety of subjects and to such extended discussions in one publication.

This plan has been adopted by almost all of the agricultural colleges and seems to meet general approval.

In compliance with the Act of Congress we shall give the costs of experiments as far as practicable, but the estimates of values can be only indifferent approximations, as they will be much varied by differences in markets, locations, methods and operators.

EXPERIMENTS IN FERTILIZING AGENTS UNDER WHEAT.

About 80 plats, each one-sixteenth of an acre, were devoted to the testing of fertilizers under wheat.

Most of these were repetitions of experiments which had been made two and three years preceding.

Many of the lands in Tennessee are too much exhausted to produce wheat, in paying crops, without some fertilizing agency. One of the main purposes of these experiments was to aid in deciding whether it will pay the farmer to apply any fertilizer directly to a wheat crop. It is almost as important to know what kinds of manures, and in what quantities will give the best results; also the time and manner of making the application.

The experiments, reported herein, were intended to contribute to the solution of these and other questions connected with the use of fertilizers. We do not profess to have secured a complete answer to any of them. Such problems present so many conditions, so many variable and unknown quantities; as the forces of life, varieties of soil, difference in climate, personal errors, etc., etc., that they can be entirely solved only by the co-operation of many experimenters working through a long series of years; yet the results presented in these tables will not only contribute to a general conclusion; but may, if properly studied, suggest to the farmer many and valuable changes and improvements in the uses and applications of fertilizers.

TABLE NO. 1.

EXPERIMENTS IN WHEAT CULTURE TESTING COMMERCIAL
FERTILIZERS.

No. of Plat.	NAME OF FERTILIZER AND AMOUNT PER ACRE.	Cost.	Bushels per Acre.	Lbs. of straw to 1 lb. grain.
lxxxii	100 lbs. Baldwin's Bone Compound.....	\$2 00	17.86	1.01
lxxxiii	200 lbs. Baldwin's Bone Compound.....	4 00	18.80	1.93
lxxxiv	300 lbs. Baldwin's Bone Compound.....	6 00	19.73	1.77
lxxxv	100 lbs. Ober's Ammoniated Sup. Phos. of Lime	2 00	18.93	2.30
lxxxvi	200 lbs. Ober's Ammoniated Sup. Phos. of Lime	4 00	25.06	1.62
lxxxvii	Unfertilized.....	.....	16.26	1.90
lxxxviii	100 lbs. Soluble Pacific Guano.....	2 00	20.53	1.85
lxxxix	200 lbs. Soluble Pacific Guano.....	4 00	22.13	1.49
xc	300 lbs. Soluble Pacific Guano.....	6 00	14.53	2.04
xc	200 lbs. Bone Meal.....	4 00	14.53	2.17
xcii	300 lbs. Bone Meal.....	6 00	20.00	1.82
xciii	Unfertilized.....	.....	24.80	1.87
xciv	300 lbs. Ober's Ammoniated Sup. Phos. of Lime	6 00	23.73	1.75
xcv	100 lbs. Chesapeake Guano.....	2 00	23.73	1.71
xcvi	200 lbs. Chesapeake Guano.....	4 00	21.86	1.92
xcvii	100 lbs. Anchor Brand.....	2 00	17.06	1.60
xcviii	200 lbs. Anchor Brand.....	4 00	21.06	1.72
xcix	Unfertilized.....	.....	18.66	1.64
c	300 lbs. Chesapeake Guano.....	6 00	14.53	1.82
ci	100 lbs. Knickerbocker.....	2 00	23.20	1.64
cii	300 lbs. Anchor Brand.....	6 00	15.20	1.68
ciii	100 lbs. Legal Tender (Patapsco).....	2 00	16.80	1.38
civ	200 lbs. Legal Tender (Patapsco).....	4 00	18.66	1.50
cv	300 lbs. Legal Tender (Patapsco).....	6 00	23.46	1.72
cvi	Unfertilized.....	.....	14.93	2.21
cvi	200 lbs. Knickerbocker.....	4 00	17.33	1.07
cvi	300 lbs. Knickerbocker.....	6 00	14.93	2.21
cix	400 lbs. Legal Tender and 10 bushels of sand...	8 00	22.40	1.61
cx	400 lbs. Soluble Pacific and 10 bushels of sand	8 00	19.73	1.56
cx	Unfertilized, but rolled.....	.....	12.28	1.54
cxii	Unfertilized, not rolled.....	.....	21.60	1.63
cxiii	400 lbs. Anchor Brand.....	8 00	14.53	1.66
cxiv	400 lbs. Baldwin's Ammonit'd Bone Phosphate	8 00	26.66	1.80
cxvii	240 lbs. Popplein Organic Silicated Phosphate	4 00	21.86	2.17
cxviii	240 lbs. Popplein Silicated Phosphate.....	3 00	30.13	1.38

On making a comparison between the fertilized and unfertilized lots, reported in table 1, it will be noticed that few, if any, of the commercial fertilizers give such an increase in the crop as to balance the additional cost of fertilizing. To make the estimate a fair one, we should average the productions of the fertilized and unfertilized lots. The former is about 20 bushels per acre, the latter about 18, leaving only two bushels to pay the cost of fertilizing.

Before condemning, however, the use of commercial fertilizers with wheat, some other facts should enter into the calculation.

The lots reported are very small, one-sixteenth of an acre, and the unfertilized lots seem to have been improved by the fertilizers placed around them.

For when six lots were selected at some distance from those fertilized, but on apparently as good ground, the average was only about 15 bushels per acre. That would leave five bushels to balance the cost of fertilizers. Again, some experiments made by Dr. E. M. Pendleton, author of "Scientific Agriculture," indicated very decidedly that the values of the fertilizers were not all exhausted the first year, nor even the second. This seems probable, because the 200 lbs. of fertilizer placed on one acre contained about 16 lbs. of phos. acid, 4 lbs. of potash and 5 lbs. of ammonia; but the five additional bushels of wheat from the fertilized lots carried off less than 3 lbs. of phos. acid, hardly $1\frac{1}{2}$ lbs. of potash, and about 4 lbs. of ammonia. This leaves a large unexpended value, but that value is greatly reduced by ceasing to be available in a short time.

These statements bring to notice another important fact, that on a given soil only a fixed amount of some artificial fertilizer will be assimilated by a crop of wheat.

The table shows the same thing.

In very many instances the product was not increased in proportion to the increase of the fertilizers, which results may possibly have come in part from difference of soil.

The conclusion is more than hinted, that it will not pay so well to apply more than 150 or 200 lbs. of artificial manures to one acre of wheat, as much of the plant food will be consumed by weeds, or it will assume a form insoluble for the time and become a part only of the general soil.

Other important facts were noted in the course of these experiments. Wheat fed with a large amount of ammonia or nitrogenous food was very apt to lodge, having rank growth and weak stem, it was also more subject to rust, while the plant fed on the soluble silicates, as potash and sand, exhibited more strength of stem and a greater resistance to the attacks of rust.

Lot No. 128 gave the largest yield by several bushels, and it was fertilized by what claimed to be a "Soluble Silicated Phosphate." The plants grown on that lot were remarkably vigorous and clear

of rust and the grain was very plump and heavy. The conditions of season may have been peculiarly favorable to that experiment, and it is not safe to risk much on a single test, however flattering the prospect may be.

We are repeating the same experiment again this season and we are watching its progress with much interest. We have estimated the cost of commercial fertilizers at \$2.00 per 100 lbs. This may be rather low in some instances and full high in others.

It is difficult to estimate the exact cost of transporting and distributing the fertilizer. We have tried to approximate the real costs as nearly as limited time and facilities and general expression will allow.

Again, the relative weights of the grain and straw furnish data for much discussion, and may suggest some valuable conclusions. Very many facts in these tables are worthy of notice. Indeed, something may be gathered from almost every experiment, and it is impossible to point out a tithe of the important questions, much less to discuss them, in a short bulletin like this.

Some larger lots, not reported here, gave rather better results, but the relative increase from fertilizers was about the same. One fact, though not particularly connected with this table, I mention here, because the experiment was a part of this series.

It is this: Three half-acre lots were covered with a heavy growth of young pea vines, the vines were turned under some weeks before the lots were seeded with wheat; these plats all gave excellent results. The costs and profits could hardly be given in figures, but a careful calculation convinced us that the income from these lots as compared with the outlay was considerably greater than that from any other, with two or three exceptions.

TABLE NO. 2.

EXPERIMENTS IN WHEAT CULTURE. TESTING SALTS AND OTHER
FERTILIZING AGENTS.

No. of Plat.	NAME OF FERTILIZER AND AMOUNT PER ACRE	Cost.	Bushels per Acre.	Lbs. of straw to 1 lb. grain.
cxv	200 lbs. Dissolved S. C. Phosphate.....	\$3 00	20.53	2.63
cxvi	200 lbs. Plaster.....	1 40	16.00	2.08
cxvii	200 lbs. Sulphate of Magnesia.....	6 00	25.06	1.44
cxviii	200 lbs. Sulphate of Potash.....	6 00	25.33	2.00
cxix	Unfertilized		27.73	1.45
cxx	200 lbs. Muriate of Potash.....	10 00	29.33	1.63
cxxi	200 lbs. Nitrate of Potash.....	26 00	22.66	2.70
cxxii	Unfertilized		25.33	1.52
cxxiii	200 lbs. Nitrate of Soda.....	14 00	26.66	1.32
cxxiv	200 lbs. Sulphate Ammonia.....	14 00	18.66	3.35
VILLE'S FORMULA :				
cxxxv	176 lbs. Acid Phosphate of Lime.....	22 11	22.40	1.65
	88 lbs. Chlorate Potash.....			
	168 lbs. Sulphate Ammonia.....			
	100 lbs. Sulphate of Lime.....			
cxxxvi	100 lbs. Nitrate of Soda.....	27 76	25.33	2.13
	200 lbs. Acid Phosphate Lime.....			
	100 lbs. Sulphate of Potash.....			
cxxxix	168 lbs. Sulphate Ammonia.....		24.00	1.50
cxxxix	Heavy Coat of Straw.....		21.33	1.75
cxv	Heavy Coat of Straw burned.....		24.00	1.33
cxv	80 bushels Ashes and 160 bushels Sand.....	18 00	28.00	0.85
cxv	Unfertilized			

These plats were more fertile than those reported in table No. 1. This will be noticed from the large yield from the unfertilized lots, which average about twenty-seven bushels per acre.

Most of these lots had a good amount of sand in them, and it is noticed that applications of ashes and potash gave good results. The very heavy cost of fertilizing with crude chemicals attract the attention the moment we glance at this table. The results in wheat, as here exhibited, are anything but encouraging.

The cost of the chemicals is not only very heavy, but the average production of the fertilized lots is considerably less than that of the unfertilized. The latter fact seems to indicate that an excess of certain kinds of plant food may prove a positive injury to a growing crop.

Four successive seasons these experiments with chemicals have been made without any results to encourage their general use with wheat.

The muriate of potash gave a considerable increase three seasons out of the four. Most of the experiments with the nitrate of potash and the sulphate of ammonia added to the production, but none of them yielded an increase sufficient to pay for the cost of fertilization. The results are conflicting, but the promise is so meagre as compared with the great expense, that we cannot encourage any repetition of the experiments. This method of fertilizing is too prodigal; the nitrogen and potash applied to one crop, being sufficient for very many, must lie as dead capital during a series of years, even if they yield any income whatever. The same may be stated of the other chemicals here used. The costs as given in this table were estimated from the price of the chemicals as paid by the University Farm.

We commend this table to the careful consideration and study of the farmers. They may receive from it many valuable suggestions as to the cost and value of plant food, the importance and economy of compounding, composting, etc.; also, a comparison of these lots with each other and with those on which commercial fertilizers were used may prove interesting and profitable.

TABLE NO. 3.

EXPERIMENTS IN WHEAT CULTURE. TESTING BARNYARD AND
SIMPLE MANURES.

No. of Plat.	KIND OF MANURE. AMOUNT PER ACRE.	Cost.	Bus. pr Acre.	Lbs. of straw tol lb. grain.
lii	16 tons fresh manure worked in before seeding.....	\$12 00	25.33	2.42
liii	16 tons rotted manure worked in before seeding.....	12 00	26.13	2.97
liv	16 tons rotted manure spread after seeding.....	12 00	21.86	2.28
lv	16 tons fresh manure spread after seeding.....	12 00	22.44	2.86
lvi	16 tons fresh manure & 8 bus. salt worked in af. seed'g	15 00	23.20	2.44
lix	16 tons rotted manure, 8 bus. salt and 200 lbs. bone meal worked in before seeding.....	17 00	21.60	2.02
lx	16 tons fresh manure, 8 bushels salt and 200 lbs. bone meal worked in before seeding.....	17 00	24.00	1.77
lxi	Thin layer of straw and coal ashes spread af. seeding	.....	25.06	2.21
lxii	80 bushels ashes and 80 bushels sand.....	15 00	20.00	2.09
lxiii	8 bushels salt and 80 bushels sand.....	15 00	21.86	2.34
lxiv	8 bus. salt, 80 bus. sand and 16 tons rotted stable manure put in before seeding.....	17 00	25.60	1.82
lxvi	400 lbs. ground limestone.....	1 50	19.73	1.90
lxvii	600 lbs. ground limestone.....	2 25	20.00	2.33
lxviii	800 lbs. ground limestone.....	3 00	22.44	1.79
lxix	Unfertilized.....	.....	19.73	2.20
lxx	100 lbs plaster.....	55	18.13	1.72
lxxi	200 lbs. plaster.....	1 10	18.66	2.50
lxxii	8 bushels salt.....	3 00	20.53	1.59
lxxiii	80 bushels lime.....	8 00	24.26	1.47

The most salient point presented in this Table is, probably, the cost of fertilizing. Farmers rarely apply less than twenty tons to the acre. At the rate of 75 cents per ton, which is low for saving, hauling and applying the fertilizer for one season, frequently costs more than the land would command in market.

The table shows an increase of wheat on the fertilized lots of 4 or 5 bushels per acre; the cost of fertilizing was about \$12.00, indicating a loss of \$7.50 or \$8.00 per acre for the one season. The percentage of straw is also very heavy. Such results have induced many to think that barnyard manures applied to wheat can never pay. According to Mr. Allen, many excellent farmers in New York and Ohio, where clover and grasses grow well, take the position that such manures can not meet the cost of simply hauling them for more than one mile.

Others contend that it would be cheaper to use commercial fertilizers, and we have seen that the latter did not pay if we counted the results of only one season. Just here a great error is commonly

made in the calculation. A large proportion even of the artificial and most available manures is left in the soil by the first crop. When barnyard manures are used, this unappropriated portion becomes many times the greater part. It is difficult to reckon the increased fertility of the soil or how many successive crops may be improved by one application of manures.

On the College Farm the Superintendent reports a large increase from fertilizers placed eight or nine years since. An application of forty tons per acre to poor soils, may show marked effects for more than twenty years.

Again, the unfertilized lots being surrounded by manures were enriched somewhat, as their average is larger by two or three bushels than that of lots unmanured and at a distance from fertilizers. So then, these and other results, so far as determined or suggested by experiments, rather strengthen the position that manures may be profitably used even on wheat lands. A vast proportion, however, of the plant food in manure is lost or wasted because we do not fully understand how to render it available and yet secure till the plant needs it.

Our skill in preparing plant food is limited and most of us do not employ what we have.

It is hoped that the fertilizer companies will add much to our knowledge on compounding the pabulum best suited to each crop. It is difficult to prepare a food always acceptable to wheat, which seems to be a rather dainty feeder, requiring nourishment to be exceedingly fine, or comminuted; hence it assimilates best what has been digested by some coarser plant, as peas or clover. The above facts and table suggest: 1st, That barnyard manures should for general purposes, be composted with absorbents to save the gases; 2nd, In selecting lots to be fertilized, the cost of hauling is very important; 3rd, If intended for wheat they should be fed to such plants as peas and clover, which should be turned under shortly before seeding with wheat.

The soluble phosphates and silicates seem to supply a need in the wheat plant; they have given some excellent results and I recommend that they be tested more fully.

If it be desired to apply barnyard manures directly to wheat, I recommend the hardier varieties as the "Champion Amber" and "Key's Prolific" which thrive best on this coarser and stronger food.

TABLE NO. 4.

EXPERIMENTS IN CORN CULTURE. TESTING VARIOUS FERTILIZERS.

No. of Lot.	NAME OF FERTILIZERS AND AMOUNT PER ACRE.	COST.	Lbs. in ear per Acre.	Bus. per Acre.
i	16 tons fresh barnyard manure as top-dressing.....	\$12 00	33.60	48.00
ii	16 tons rotted barnyard manure as top-dressing.....	12 00	44.80	64.00
iii	16 tons fresh b'nyd manure, 16 bus. sand plowed under	13 00	29.60	42.28
*iv	16 tons rotted bn'y manure, 16 bus. sand plowed under	13 00	24.80	*35.42
v	Unfertilized .....	.....	27.20	38.87
vi	16 tons rotted manure plowed under and 100 lbs. } each of sulphate potash and plaster, in hills.... }	16 00	48.00	68.57
vii	200 lbs. plaster.....	1 10	20.00	28.57
viii	200 lbs. plaster and 16 bus. ashes.....	2 20	19.52	27.90
ix	80 bus. lime.....	8 00	17.60	25.14
x	400 lbs. ground limestone.....	1 50	20.00	28.57
xi	200 lbs. Clotworthy's fine bone meal.....	4 00	23.20	33.14
xii	200 lbs. Clotworthy's coarse bone meal.....	4 00	37.12	53.03
xiii	200 lbs. cotton-seed meal.....	2 50	23.52	33.60
xiv	200 lbs. cotton-seed ashes.....	.....	21.92	31.31
xv	100 lbs. Legal Tender.....	4 00	14.72	21.03
xvi	Unfertilized .....	.....	15.68	22.40
xvii	200 lbs. Ober's Ammoniated Superphosphate Lime..	4 00	17.12	24.45
xviii	200 lbs. Baldwin's Dissolved Bone.....	4 00	41.60	59.42
xix	Refuse ensilage mulch.....	.....	29.12	41.60
xx	Compost of 200 lbs. each of plaster, bone meal and } river soil in hills..... }	5 00	24.16	34.51
xxi	Same as 20 planted in Chester county corn.....	.....	28.00	40.00
xxii	Unfertilized.....	.....	16.16	23.08
xxiii	Same as 20, corn half distance .....	.....	23.30	33.14
xxiv	Same as 20, corn half distance both ways.....	.....	37.60	†53.71

*About half of a stand.

†The corn was weighed in the ear, and 70 pounds to the bushel, according to custom and the law of many States.

The stand was not perfect on any of the lots, it being injured by late cold and the wire-worm.

Many of the experiments reported in this table, as those in Nos. 1, 2 and 3, are repetitions of tests previously made.

It will be necessary to repeat many times before a fair average can be had. On these plats, the stand was so unequal that no just conclusion can be formed.

We can, however, get some idea as to effect of fertilizing. It is pretty evident that only a small portion of the barn-yard manure was appropriated by this crop, and probably less than half the commercial fertilizers: yet the former gave an increase of about 25 bushels and the latter near 15 bushels per acre. Thus it is seen

that fertilizers under corn give not only a greater increase, but a greater proportion of excess than when applied to wheat.

The previous season gave some larger results from manured lots, but not so uniform an increase; still, all the experiments taken together indicate that not only the barn-yard but the manipulated manures pay, and pay well, when properly applied to corn.

But here, also, we find a very great loss of plant food, and here again the importance of proper composting is impressed upon us.

With plants, as with people, the *kind and preparation* of food is often far more important than the quantity in promoting health and vigor. According to Hellriegel's experiments, as reported by Johnson, only 72 lbs. of potash and 74 lbs. of nitrogen are needed in 1,000,000 lbs. of soil to give a maximum crop.

Very concentrated manures are often injurious, as suggested and indicated by the experiments with chemicals. It will hardly pay to place great lumps of strong stable manure under corn plants.

The food should be not only soluble, but properly diluted and proportioned before we can expect the best results from fertilizing.

This presents to the chemist and agriculturalist a practical question of very great moment to our people.

TOP DRESSING.

Some experiments were made with manures on grass and clover : but the conclusions are somewhat inexact and the limits of this bulletin exclude the table.

A very light application of barn-yard manure, 5 or 6 tons per acre, gave a large increase for several successive seasons. Other experiments are now progressing to be reported later. These and the former ones all show that fertilizers on grass lands pay better than almost anywhere else.

Some efforts to test the value of composts and several commercial brands on vegetable and other crops, will be discussed in the larger report.

ENSILAGE.

Though we have found impaired ensilage one of the very best fertilizing agents, we do not insert this paragraph to report that excellence; but to recommend the production of it as a stock food. During a trial of three seasons it has proven a good and cheap substitute for roots. The ensilage from one acre will produce about three times as much flesh and butter as the hay from the same acre.

The experiment has been made at this Station and at many others; many assign a higher value, very few make it less. I think the risk will be small to make so large a gain: I therefore recommend that farmers having considerable herds of cattle try this method of preserving food. Let the silos be well cemented and guarded against leaks; let them be filled with corn cut by a feed cutter, and then let the mass be well weighted so as to exclude all air and the gains of two seasons will repay the construction.

ANALYSES OF FERTILIZERS.

While chemical analysis can not exactly determine the value of fertilizers, it can approximate the proportion of plant food they contain; also it can do and has done much to prevent the sale of spurious or worthless articles. This latter is a great benefit to farmers who have no other means of knowing the value of fertilizers before purchasing, and it is hardly a less gain to honest dealers who wish to sell goods of real merit.

The laws, for the inspection and analysis of fertilizers, like all good laws were intended to protect the innocent against fraud, and they have already secured honest purchasers and dealers from heavy losses.

JOHN W. GLENN,

Prof. Agr. &c., and Director Experiment Station, University Tennessee.

By order of Board of Control.

ANALYSES AND COMMERCIAL VALUES OF COMMERCIAL FERTILIZERS

(From 1b to 64b inclusive.)

Inspected, Analyzed, and Admitted to Sale in Tennessee.

Made by JOHN W. GLENK, Director of Experimental Station, University of Tennessee, under the supervision of the Commissioner of Agriculture, Statistics, Mines and Immigration, of the State of Tennessee.

Manufacturer or Agent.	Location.	Name.	Number.	Water.	Phosphoric Acid.			Ammonia.	Potash.	Value.
					Insol.	Avail.	Total.			
Moses & Clemens.....	Richmond, Va.	Avalon Bone Compound.....	1b	16.50	2.07	9.82	11.89	1.42	2.32	\$38.168
" ".....	" "	Avalon Dissolved Bone.....	2b	14.40	1.16	9.95	11.12	1.17	1.78	42.060
National Fertilizer Co.....	Nashville, Tenn.	Avalon Dissolved Bone and Potash.....	3b	18.99	0.28	10.94	11.12	1.31	2.47	28.152
" ".....	" "	Acid Phosphate Compound.....	4b	13.67	2.86	11.44	13.90	2.53	3.90	30.228
Northwestern Chemical Works.....	Chicago, Ill.	Tobacco Compound.....	5b	12.79	2.44	9.50	11.94	2.53	3.90	39.504
" ".....	" "	Tobacco Compound.....	6b	18.25	1.11	8.21	16.33	1.23	2.41	31.224
Pacific Guano Co. (Agents).....	Baltimore, Md.	Dissolved Bone Phosphate.....	7b	14.37	3.32	13.01	16.33	1.38	3.31	31.224
Pendleton & Son Co.....	Athens, Tenn.	Georgia State Grange Acid Phosphate.....	8b	9.53	3.42	7.39	13.58	1.67	2.84	28.984
Popplein Silicated Phosphate Co.....	Baltimore, Md.	Superphosphate.....	9b	7.39	8.88	4.05	9.64	3.37	1.67	35.816
" ".....	" "	Superphosphate.....	10b	11.72	2.14	8.88	12.93	3.05	3.95	35.816
Atlantic & Va. Fertilizing Co.....	Richmond, Va.	Organic Silicated Phosphate.....	11b	11.23	2.02	10.82	11.84	5.07	5.65	27.756
" ".....	" "	Organic Silicated Phosphate.....	12b	13.85	2.49	1.91	14.40	5.07	5.65	35.700
Robt. Brown Oil Co.....	St. Louis, Mo.	Gold Dust Tobacco Fertilizer.....	13b	8.35	2.82	9.44	10.26	1.71	2.26	30.864
Michigan Carbon Works.....	Detroit, Mich.	Homestead Guano.....	14b	11.37	2.95	8.22	11.70	1.86	2.28	31.388
Patapasco Guano Co.....	Baltimore, Md.	Patapasco.....	15b	14.07	4.16	8.56	12.94	2.76	2.28	34.080
Resin Fertilizer Co.....	" "	Imperial Potash Manure.....	16b	13.65	4.38	8.56	12.94	1.71	2.28	22.596
Chappell & Son.....	" "	Soluble Flour of Bone Super Phosphate.....	17b	11.05	3.83	6.83	10.22	1.53	1.85	24.900
" ".....	" "	Ammoniated Super Phosphate.....	18b	11.68	4.11	7.46	11.57	2.40	1.54	24.900
" ".....	" "	Dissolved South Carolina Bone.....	19b	10.49	3.35	11.49	14.84	2.40	1.54	27.576
" ".....	" "	Soluble Flour of Bone Super Phosphate.....	20b	8.95	3.35	6.73	9.83	1.64	1.64	27.576
Patapasco Guano Co.....	" "	Legal Tender.....	21b	9.30	5.71	7.66	13.37	1.62	1.66	28.152
Chesapeake Fertilizer Co.....	" "	Chesapeake Guano.....	22b	12.91	5.41	8.77	13.37	1.62	1.66	33.576
Equitable Fertilizer Co.....	" "	O. K., Super Phosphate.....	23b	13.10	4.33	8.66	16.12	2.02	1.92	22.200
" ".....	" "	Esmeralda.....	24b	18.63	12.46	5.86	16.12	2.02	1.92	31.588
" ".....	" "	Equitable Ammoniated Super Phosphate.....	25b	15.49	5.65	6.90	13.45	1.95	2.37	39.016
Harris & Whittle.....	Petersburg, Va.	Owl Brand Guano.....	26b	9.11	9.75	7.90	13.45	1.95	2.37	29.576
Symington Bros. & Co.....	Baltimore, Md.	Symington's Bone and Potash.....	27b	14.15	2.89	9.67	12.06	2.10	2.10	29.388
Northwestern Fertilizing Co.....	Chicago, Ill.	Bone Meal.....	28b	12.26	4.47	7.76	11.51	1.84	2.31	27.456
Chemical Co. of Canton.....	Baltimore, Md.	Baker's Standard Am'ted Bone Phosphate.....	29b	11.39	7.17	7.25	11.72	1.67	1.66	37.216
Allison & Addison.....	Richmond, Va.	Wheat Manure.....	30b	11.76	5.60	4.40	12.71	1.67	1.66	37.216
Michigan Carbon Works.....	Detroit, Mich.	Raw Bone and Potash.....	31b	11.76	0.00	9.66	9.56	2.10	0.88	33.480
Lister & Sons.....	Newark, N. J.	Lister's Am'ted Dissolved Bone Phosphate.....	32b	14.25	0.00	9.66	10.45	2.38	4.11	38.824

Ober & Co.	Baltimore, Md.	34b	11 56	2 95	7 61	10 56	2 46	1 95	33 372
W. A. James, Agent	Richmond, Va.	35b	12 50	6 22	3 10	9 32	2 09	2 10	19 992
Southern Fertilizer Co.	Baltimore, Md.	36b	9 49	4 99	5 42	10 45	2 52	1 47	26 944
Pacific Guano Co.	Baltimore, Md.	37b	12 64	5 07	6 92	11 99	3 64	2 39	26 948
Knickerbocker Co.	Nashville, Tenn.	38b	12 23	6 80	6 35	13 05	2 20	1 14	26 788
National Fertilizer Co.	Baltimore, Md.	39b	8 38	4 09	8 27	12 36	2 20	1 66	32 40
Brown's Chemical Co.	Richmond, Va.	40b	7 35	5 96	5 41	12 36	2 16	2 71	26 604
Southern Fertilizer Co.	Memphis, Tenn.	41b	3 83	15 86	90	11 67	2 16	2 71	7 188
Memphis Fertilizer Co.	St. Louis, Mo.	42b	1 14	4 13	1 54	26 63	0 00	7 49	3 696
C. C. Fuller	Bristol, Tenn.	43b	7 40	4 13	8 13	25 25	2 15	2 75	33 108
J. H. Winston	Nashville, Tenn.	44b	6 27	4 58	3 40	7 98	4 54	1 12	31 296
National Fertilizer Co.	Clarksville, Tenn.	45b	9 96	4 30	8 69	12 99	0 00	2 12	23 40
Western Chemical Works	Nashville, Tenn.	46b	10 33	4 33	8 65	12 98	1 97	1 43	31 836
Singer & Co.	Nashville, Tenn.	47b	7 10	8 53	3 16	17 74	3 67	1 13	26 548
Michigan Carbon Works	Detroit, Mich.	48b	7 98	18 95	10 27	22 05	4 17	1 07	27 676
Southern Fertilizer Co.	Clarksville, Tenn.	49b	17 00	49	30 27	10 76	3 30	1 06	41 76
Pacific Guano Co.	Baltimore, Md.	50b	12 07	3 60	7 99	11 59	2 55	49	32 004
Long & Dugdale	Baltimore, Md.	51b	14 07	7 44	4 46	11 90	2 44	1 08	32 712
Brown & Co.	Cleveland, Tenn.	52b	12 18	5 04	9 81	14 85	1 16	0 99	24 42
Crow & Co., Agents	Baltimore, Md.	53b	9 24	6 14	6 60	12 74	2 41	1 76	27 924
Zell Guano Co.	Baltimore, Md.	54b	11 05	6 70	6 39	13 09	2 44	1 76	27 160
Clotworthy	Knoxville, Tenn.	55b	12 70	8 84	6 47	10 62	16 29	0 00	27 432
J. J. McGavock, Agt. Nashville.	St. Louis, Mo.	56b	13 17	5 67	10 62	12 99	2 59	1 26	30 840
Maryland Fertilizer Co.	Baltimore, Md.	57b	10 30	5 35	7 64	12 99	2 59	1 26	30 840
Read & Co.	New York	58b	11 26	3 58	9 29	12 87	95	1 13	20 952
Zell Guano Co.	Baltimore, Md.	59b	7 20	20 78	4 49	25 77	2 12	0 00	28 212
		60b	2 61	8 32	4 99	12 31	3 41	1 40	30 023
		61b	13 30	6 80	5 94	12 44	2 09	2 53	28 604
		62b	11 36	5 46	8 59	14 05	0 00	2 49	23 604
		63b	13 81	1 74	7 37	9 11	2 07	2 03	30 060
		64b	11 14	4 46	8 53	12 99	1 08	1 36	27 288

* Analysis begun with 20b and 21b, but not completed because guaranteed analysis was not furnished.

Note.—In making the above estimates, the values assigned to the chemicals are as follows: Available phosphoric acid, 12 cents per lb.; ammonia, 24 cents per lb.; potash, 6 cents per lb. The value of fertilizer is estimated thus:

No 34b, available phosphoric acid, 7.61 multiplied by 20 cwt. in ton; multiplied by 12c., price per lb	Value	\$18.284
No 34b, ammonia, 2.66 multiplied by 20 cwt. in ton; multiplied by 24c., price per lb	Value	12.768
No 34b, potash, 1.46 multiplied by 20 cwt. in ton; multiplied by 12c., price per lb	Value	2.940
		\$33.972

In most States the insoluble phosphoric acid is valued, but by the Tennessee law for the inspection of fertilizers it is not. If reckoned, the price of some of the fertilizers would be considerably increased. In making estimates, of course the costs of manipulating, sacking and transportation are not counted. In determining available phosphoric acid, the citrate solution had a temperature of 85° C., as recommended by the Convention of Agricultural Chemists, May 15, 1884. This solution yields a small increase of phosphoric acid. In the first thirty analyses the solution was 40° C.

W. E. MOSES, Chemist.

J. W. GLENN, Director State Expt. Station, Tennessee.

FIFTEENTH BIENNIAL REPORT
OF THE
Trustees, Superintendent & Treasurer
OF THE
TENNESSEE HOSPITAL
FOR THE
INSANE,
PRESENTED TO THE
GENERAL ASSEMBLY,
JANUARY 5, 1885

NASHVILLE:
ALBERT B. TAVEL, PRINTER TO THE STATE.
1885.

OFFICERS OF THE HOSPITAL.

TRUSTEES.

EAST TENNESSEE:

T. NIXON VAN DYKE, F. W. EARNEST.

MIDDLE TENNESSEE:

H. B. BUCKNER, EILL S. BROWN,
DANIEL B. CLIFFE, M. D., WILLIAM T. BERRY.

WEST TENNESSEE:

JOHN L. T. SNEED, WM. M. WRIGHT, M. D.

JOHN H. CALLENDER, M. D.,
PHYSICIAN AND SUPERINTENDENT.

JOHN A. BEAUCHAMP, M. D.,
ASSISTANT PHYSICIAN.

WILLIAM B. CLARK,
STEWARD.

MRS. DORA BEAUCHAMP,
MRS. A. L. PAYNE,
MATRON AND ASSISTANT.

TREASURER OF THE HOSPITAL:
ATHA THOMAS.

NASHVILLE, JANUARY 3, 1885.

His Excellency, WM. B. BATE, Governor of Tennessee:

SIR: I have the honor herewith to deliver the Biennial Report of the Trustees, Superintendent and Treasurer of the Tennessee Hospital for the Insane, and invite your consideration thereto, and request its transmission to the General Assembly.

Respectfully,

H. B. BUCKNER,
President of the Board of Trustees.

REPORT OF BOARD OF TRUSTEES.

TENNESSEE HOSPITAL FOR THE INSANE, }
NEAR NASHVILLE, January 2, 1885. }

To the General Assembly of Tennessee :

The Board of Trustees of this institution, in pursuance of the duty imposed on them by law, having convened and examined its management and operations for the past two years, and inspected thoroughly its condition, and having received the clear and comprehensive report of the Superintendent, and also the report of the Treasurer of the Hospital, beg leave herewith to submit them to your honorable body.

Our personal examination justifies, in all respects, the representations made in the report of the former touching its management, and the general superior condition evident in its various departments, and a special committee of our body have investigated the expenditures and accompanying accounts and vouchers of the Superintendent and Treasurer, and have verified their correctness and certified thereto.

The Report of the Superintendent is so minute in its statements in relation to all the important features necessary for our consideration and that of your body, and so luminous and satisfactory in their presentation, that we might properly submit it without other comment than that of general approval. We deem it proper, however, to direct special attention to several suggestions it offers, and recommend such legislation as may be considered wise in relation to the matters they involve.

The reference to a large number of the patients sent to the institution under criminal indictments is clearly shown to be a misapprehension of the meaning of the statute, and an erroneous as well

as unjust practice, and we think it should be so clearly amended that its operation will be restricted to the limited number of cases occurring from time to time, for which it was evidently intended in the Code as at present phrased.

A recommendation made by the Board in former reports on a subject alluded to in the Superintendent's present report, relative to greater promptness in the sending and removal of patients by county authorities, we venture to repeat, viz.: that the clerks of county courts, who are by law the officers designated to confer with the Superintendent, should be vested with power to draw on the County Trustee at any time for the necessary funds for such purposes, it being the duty under the law of counties to pay the transportation to and fro of indigent patients.

We would also direct legislative attention to the paragraph in the Superintendent's Report with regard to the necessity of defining hospital districts, when the buildings now in progress of construction near Knoxville shall be completed. We are advised that such is the system prevailing in other States having several hospitals for the insane, and it is obviously proper, in order that each may have its assigned population to serve. Not less proper, it would seem, is the accompanying suggestion of a special local trusteeship for the new hospital to be added to the number of this Board, and chiefly for the reason that an immediate local government by a portion of the trustees residing near the institution, is an important and necessary feature of their administration. A slight amendment of the present efficient hospital code, which has the sanction of long experience in this and other States, would effect these necessary changes. We venture to offer these suggestions, as by the law of 1883, authorizing the erection of the new hospital, we are clothed with its trust when it shall be surrendered to the State for acceptance.

The report of the treasurer of the Hospital shows a gratifying balance in the Treasury, and that all outstanding liabilities we were compelled to report when we last addressed the General Assembly, have been liquidated by the sum appropriated to supply the deficiency in the hospital treasury caused by insufficient appropriations two years before for ordinary support. The institution has, during our connection with it, certainly, been conducted with wise and prudent economy, and its comparsion in that regard with similar institutions in any of the States will amply support this statement,

and it deserves the enlightened and liberal support it has usually received, and which we confidently bespeak for it from your body.

Our careful inspection of the building and hospital appurtenances, at this visit, shows that a large work of repair, judicious alteration, and improvement has been conducted by the local Board and Superintendent, and that the appropriation we so urgently asked for two years ago, and that was so liberally granted, has been expended wisely, usefully and tastefully, and with proper economy. The report of the Superintendent describes these with sufficient completeness, and the building, as we now find it, justifies the claim that its facilities equal in substantial, practical worth any of the more modern structures. The ventilation and improved sanitary arrangements are features of special attention, while its preservation from decay by the thorough painting applied, not only adds to its sightliness but to its durability.

The adjustment of the sewerage damage suit, which had become a chronic topic in these reports, as concluded by the local Board, and which the report of the Superintendent fully describes, we approve as proper and necessary, and we think the institution will in future be secure from such vexatious claims.

Our inspection of the condition of the commodious structure near the main hospital building, built in 1868, for the special accommodation of the insane of the colored population, shows the same general order, neatness and discipline which pervades the former, and that this portion of the wards of the State's charity are the recipients of every attention and comfort necessary to their afflicted condition.

Our meeting has been saddened by the conspicuous absence of the Hon. Geo. W. Jones, whose recent death the Board of Trustees, as well as the State, has reason to deplore as a common bereavement. His long service and ripe experience as a member of the Board had made him familiar with the affairs and operations of this great charity in all its details, while the tender sympathies of his nature, always easily touched by the sight of misfortune, superadded to a conscientious sense of public duty, rendered his ready co-operation in every measure tending to its relief, an inspiration and a doctrine. A wise and prudent coadjutor, an honorable counsellor, and a loyal and faithful public servant, we are comforted by the reflection that, while his death creates a palpable void in our councils,

he has passed away with a public and private reputation unflecked and undefiled.

The compensation of subordinate officers and employes of the Hospital is under the control of the Board, and we have felt it to be our duty to inaugurate a system of graduated compensation for ward attendants, under which their present very meagre wages will, by the addition of a small per cent. annually, be graduated by the devotion of their service, their fidelity, and the experience thereby acquired—the additional per cent. to be paid at the end of the year only to those who have, in the judgment of the Resident Board and Superintendent, served faithfully for that period—and to be computed upon the amount of their present compensation and not compounded. Thus, for example, an addition of one per cent. for the first year, two for the second, and at this rate increasing for ten years; while it would be but an inconsiderable increase, it would, nevertheless, be a discrimination in favor of skilled labor and experience, and would be some inducement for continued service. We have felt it to be our duty also to direct an increase of the compensation of the female attendants from \$15.00 per month to that paid to male attendants per month, and thus to equalize the wages of such employes for like services. Upon this subject we venture the suggestion, that the qualities essential in the interior service of the hospital are rarely found combined in the same person. Superadded to the danger of the position of attendant, it is perhaps, in many other respects, the most painful and uninviting of all the fields of public employment. In the selection of these agents, the Superintendent has, in spite of very inadequate compensation, consulted the best interest of the unfortunates under his charge, with the happy result of having gathered around him a corps of assistants gifted with the temper, disposition and taste adapted to such service, and especially with those qualities of super-eminent value in managing the insane—courage, patience, and that sort of human “charity that suffereth long and is kind.” It is a short-sighted statecraft that would cripple the operations of this great charity by withholding from laborers like these a just reward for their services. In such a case, that sort of sentimental economy that would repel the very best of skilled labor, would be worse than a blunder, and almost a crime.

In concluding this report, we must again bear cheerful testimony

to the skill and fidelity of the learned and accomplished Superintendent, and to his assistants in the administration of the affairs of the Hospital. We are satisfied that all that a humane discipline, a tender vigilance and consummate ability could achieve, has been done to contribute to the comfort and restoration of its unfortunate inmates. We can only regret that a public duty so well performed, so onerous, so perilous, and always of great responsibility, should be so inadequately compensated. As this is fixed by statute, we beg leave to suggest to your honorable body the consideration of the question of its increase. The present salary of the Superintendent is two thousand dollars per annum—wholly insufficient, as we think, as a compensation for the heavy burthen he bears—and greatly less than is paid by many other States for like services. We respectfully recommend that the salary of this office be increased to a reasonable, just and adequate amount for the valuable and intelligent service he renders the State.

Your obedient servants,

H. B. BUCKNER, *President*,
 W. T. BERRY,
 T. NIXON VANDYKE,
 JOHN L. T. SNEED,
 NEILL S. BROWN,
 F. W. EARNEST,
 D. B. CLIFFE,
 W. M. WRIGHT.

REPORT OF SUPERINTENDENT.

OFFICE OF THE SUPERINTENDENT, }
December 19, 1884.

To the Board of Trustees of the Tennessee Hospital for the Insane :

In obedience to the statute organizing this institution, by which its administration and operations are committed to your trust and oversight, as your chief executive officer in discharge of that responsible duty, I herewith submit the report of its condition and conduct for the biennial term concluding this date, and trust its facts and the form of their presentation will prove clear and satisfactory, and enable you to accompany them, in your report to the General Assembly, with such comment as may be deemed proper for the full information of that body.

It is a source of gratification at the outset of the usual exposition of details which comprise the body of reports of this description, to be able to affirm that those referring to the immediate beneficent purposes for which the institution was founded, will exhibit a just and reasonable degree of accomplishment. Though the capacity of the hospital buildings has not been increased since the additions made in 1871, the record of each succeeding term shows an increase in the number of patients served, that of this date exceeding by twenty seven any former period. Viewed in one light, this is a statement not altogether creditable to the State, for it signifies an overcrowded institution, with all the hindrances to cure and proper custodial care that fact implies. Called to do the entire work of this kind for the insane members of a population of a million and a half, the urgent pressure for admission has made it, however, an unavoidable necessity. The measure of success under such forbidding circumstances, as demonstrated in the appended tables, justi-

fies a modest claim that the various duties of internal management have, at least, been fairly well performed by those in charge of them.

The term covered by this tabulation of facts has been an even and uneventful current of hospital history—the constant income of the ordinary types of mental disorder to be found in such institutions the world over, and a regular outgo of persons wholly and partially recovered, with about the average rate of mortality. No epidemic disorder of a general nature, or disease induced by local causes has prevailed in the population. No casualty or distressful occurrence of any kind is to be recorded. The exemption from the latter two of these misfortunes, in view of the defective condition of the buildings, heretofore so frequently adverted to in reports, with the population always in excess of proper room, and the fact that for nearly six months past a general work of reparation, externally and internally, has necessitated the greater or less contact of patients with a score or more of mechanics of various kinds, accompanied with unavoidable confusion and derangement of discipline in the wards, is a matter of special congratulation. Relief in great degree from disquietude as regards an overplus of inmates in future, and an unsatisfactory sanitary condition of buildings, is confidently expected in the completion of the new hospital near Knoxville during the coming year, and is found also in the very considerable repairs and improvements which the liberality of the last General Assembly has enabled us to make in our own structures.

Hospital reports of this character, though in one feature they relate to the subjects of disease, are not of the nature of scientific papers, and the compilation of facts touching the number, movement, personal history and pathological characteristics of patients, are more specially intended for the uses of the sociologist and legislator. Their primary object is to furnish information of the amount and character of the work performed by the institutions they describe, and secondly, to afford data for conclusions approximately true, at least, as to the causes which tend to produce the insane element of the dependent classes of society. In this light, insane hospitals and their operations, together with the facts they accumulate, are agencies on the highest plane of enlightened modern civilization. They not only administer comfort, relief and restoration to the afflicted, but their combined statistics

compose a body of knowledge which it is not utopian to hope may, under the stimulus of that profound spirit of inquiry so characteristic of human progress in this era, be utilized in future for the curtailment and prevention, in large degree, of that most lamentable form of degenerative disorder which bears the name of insanity.

The world has long since discarded the absurd idea that insanity is a demoniacal visitation, and recognizes it as a disease amenable, in its early stages, to medical, hygienic and moral therapeutics; and while, as has been said, it is not pertinent to discuss it scientifically in publications of this character, it is proper to insist upon and iterate that leading truth before the public mind. To acquire it, as it is now comprehended by the well-informed, was a very great step in advance, not greater, though, than it has been ventured to hope will yet be attained in the removal of its more prolific causes by the establishment of more enlightened social and hygienic laws and customs, and the intellectual and moral elevation of the race. Harrowing and repulsive as are the expressions of insanity in any of its marked forms, to contemplate it as the physical disease it unquestionably is, tends to stimulate effort and hope for its relief, while it renders us more tolerant of its frantic and perverse exhibitions, and substitutes pity and sympathy for the abhorrence and disgust with which its miserable victims were formerly execrated. There be those, few comparatively in number, as they are feeble in intelligence on the subject, who in the care and management of the insane, would practically negative this great cardinal truth, and who are prone to disparage the value and efficiency of properly organized and conducted hospitals for their remedial and custodial care. To preserve what has been gained, and to protect the insane from the application of the harmful vagaries of these speculative dreamers, it is important to instruct the popular intelligence that a deranged mind is due to a disordered brain and nervous system, and is the product and expression of disease; that insanity is perverted functional action of the brain, manifesting itself in alteration in modes of thought, judgment and feeling, in loss of self-control, and in change of general conduct and character. For the correction of these aberrations from the subject's normal standard in these respects, all needful appliances for his control are indispensable to his proper treatment. In a hospital these should be found and administered with

superior judgment and skill, whether it be in the form of medicine, hygienic restriction, moral suasion, seclusion, or corporal restraint ; and it is sufficient, in concluding these observations, to emphasize the fact, that experience records all systematic attempts to treat to restoration, or ameliorate in any satisfactory measure, the condition of the insane who require custodial oversight, without agencies of this sort, as practically abortive. Hospitals for the treatment and care of insanity as a disease, like all other human institutions and instrumentalities, are not perfect and omnipotent in their adaptation of means to ends ; but founded on incontrovertible scientific fact, they will outlive in the public comprehension and confidence all the fantastic theories of colonization and absolute non-restraint of the insane, which ferment in the brains of those who ignorantly decry them.

The information contained in the tables herewith presented contribute no special, or unusual fact in the causation or characteristics of the disease, nor add any important sum to the stock of knowledge relative thereto, but to the judgment of the compiler under whose eye the facts passed, it corroborates the correctness of the preceding observations, and serves, as does former experience, to confirm his opinions.

TABULAR STATEMENT.

GENERAL STATISTICS OF POPULATION, 1883-1884.

MOVEMENT OF POPULATION.

	Males.	Females.	Totals.
Patients in Hospital Dec. 19, 1882.....	209	199	408
Patients admitted from Dec. 19, 1882, to Dec. 19, 1884.....	114	108	222
Whole number of patients in term.....	323	307	630
Patients discharged from Dec. 19, 1882, to Dec. 19, 1884	111	107	218
Patients remaining Dec. 19, 1884.....	212	200	412

CLASSIFICATION OF PATIENTS DISCHARGED.

Recovered	32	35	67
Improved.....	23	37	60
Unimproved.....	10	13	23
Escaped.....	6		6
Died.....	40	22	62
Total.....	111	107	218

CLASSIFICATION OF PRESENT HOSPITAL POPULATION AS TO RACE.

White patients.....	190	182	372
Colored patients.....	22	18	40
Total.....	212	200	412

GENERAL STATISTICS—*Continued.*CLASSIFICATION OF PRESENT POPULATION AS TO HOSPITAL
STATUS.

	Males.	Females.	Total.
Patients at charge of the State	186	159	345
Patients at charge of counties	12	15	27
Patients at charge of friends.. ..	14	26	40
Total.....	212	200	412

STATE PATIENTS UNDER CRIMINAL INDICTMENT.

Males	21		21
Females.....		6	6
Total.....	21	6	27

Maximum number of all classes of patients in term.....418

Minimum number of all classes of patients in term382

Average daily population during term.....400

TABLE I.

AGE OF PATIENTS ADMITTED IN BIENNIAL TERM.

From 15 to 20 years.....	7	8	15
From 20 to 30 years.....	30	26	56
From 30 to 40 years.....	38	32	70
From 40 to 50 years.....	26	18	44
From 50 to 60 years.....	8	17	25
From 60 to 70 years.....	3	7	10
From 70 to 80 years.....	2		2
Total.....	114	108	222

TABLE II.

NATIVITY OF PATIENTS ADMITTED IN BIENNIAL TERM.

Tennessee.....	171	New Jersey	1
North Carolina.....	7	Indiana	1
Virginia... ..	5	Louisiana	1
Kentucky	5	South Carolina	2
Alabama	4	Germany.....	4
Mississippi.. ..	2	Ireland	2
Georgia	2	England	1
Ohio.	2	Italy	1
Texas.....	1	Unknown	9
Missouri	1		
		Total	222

TABLE III.

OCCUPATION OF PATIENTS ADMITTED IN BIENNIAL TERM.

Farmers	54	Tailors	1
General laborers.....	29	Tinners.....	1
Merchants.....	10	Painters.....	1
Physicians	4	Carpenters	1
Clerks	3	Housewives	62
School teachers.....	1	Unmarried Females	34
Lawyers	1	House Servants	11
Machinists.....	1	Factory Girls.....	1
Stock dealers	1	Unknown.....	5
Millers	1		
		Total.....	222

TABLE IV.

DOMESTIC CONDITION OF PATIENTS ADMITTED IN BIENNIAL TERM.

	Males.	Females.	Total.
Married	55	52	107
Single	51	42	93
Widowers.....	5		5
Widows		14	14
Unknown.....	8		3
Total.....	114	108	222

TABLE V.

DEGREE OF EDUCATION OF PATIENTS ADMITTED IN BIENNIAL TERM.

Superior.....	11
Good.....	42
Fair	62
Limited.....	79
None.....	28
Total.....	222

TABLE VI.

ACTUAL AND ALLEGED CAUSES OF INSANITY OF PATIENTS
ADMITTED IN BIENNIAL TERM.

	Males.	Females.	Total.
Hereditary Transmission.....	54	57	111
Chronic Ill-health.....	4	13	17
Uterine Disorder.....		9	9
Domestic Trouble.....	2	11	13
Puerperal State.....		4	4
Epilepsy.....	5	4	9
Climacteric Change		2	2
Excessive Grief.....		3	3
Spinal Disorder.....		1	1
Sunstroke.....	8		8
Masturbation.....	10		10
Overwork.....	6		6
Alcoholic Excess.....	13		13
Cranial Injury	1		1
Financial Trouble.....	1		1
Unknown.....	10	4	14
Total.....	114	108	222

TABLE VII.

FORM OF MENTAL DISORDER IN PATIENTS ADMITTED IN
BIENNIAL TERM.

	Males.	Females.	Total.
Acute mania.....	38	18	56
Sub-acute mania.....	25	12	37
Chronic mania.....	11	10	21
Epileptic mania.....	4	1	5
Hysterical mania.....		4	4
Recurrent mania.....	5	19	24
Acute melancholia.....	4	18	22
Chronic melancholia.....	8	10	18
Acute dementia.....	4	11	15
Chronic dementia.....	9	2	11
Epileptic dementia.....	1	3	4
General paralysis.....	5		5
Total.....	114	108	222

TABLE VIII.

DURATION OF INSANITY BEFORE ADMISSION OF PATIENTS ADMIT-
TED IN BIENNIAL TERM.

	Males.	Females.	Total.
From 1 to 3 months.....	5	6	11
From 3 to 6 months.....	7	7	14
From 6 to 9 months.....	4	4	8
From 9 to 12 months.....	14	8	22
From 1 to 2 years.....	35	26	61
From 2 to 3 years.....	17	12	29
From 3 to 4 years.....	6	11	17
From 4 to 5 years.....	11	9	20
From 5 to 10 years.....	11	15	26
From 10 to 20 years.....	4	9	13
For 34 years.....		1	1
Total.....	114	108	222

TABLE IX.

CAUSES OF DEATH OF PATIENTS DURING BIENNIAL TERM.

	Males.	Females.	Total.
Chronic insanity and marasmus.....	15	12	27
Acute insane exhaustion from transportation to Hospital.....	4	1	5
Pulmonary decay	5	7	12
Convulsions	4	1	5
Paralysis	6	1	7
Abdominal aneurism.....	1		1
Disease of heart (chronic)	1		1
Apoplexy.....	1		1
Acute diarrhea.....	1		1
Old age.....	2		2
Total.....	40	22	62

TABLE X.

SHOWING YEAR OF ADMISSION, AND NUMBER OF YEARS RESIDENCE
OF PATIENTS AT PRESENT IN HOSPITAL.

1845.....39 years,	1	1864.....20 years,	1	1876..... 8 years,	15
1850.....34 "	1	1865.....19 "	5	1877..... 7 "	18
1853.....31 "	1	1866.....18 "	2	1878..... 6 "	23
1855.....29 "	1	1867.....17 "	9	1879..... 5 "	21
1856.....28 "	1	1868.....16 "	4	1880..... 4 "	19
1857.....27 "	2	1869.....15 "	8	1881..... 3 "	24
1858.....26 "	2	1870.....14 "	9	1882..... 2 "	31
1859.....25 "	3	1871.....13 "	15	1883..... 1 "	50
1860.....24 "	1	1872.....12 "	16	1884, less than 1 yr..	86
1861.....23 "	4	1873.....11 "	10		
1862.....22 "	1	1874.....10 "	20		412
1863.....21 "	1	1875..... 9 "	8		

TABLE XI.

NUMBER OF STATE PATIENTS FROM EACH COUNTY NOW IN HOSPITAL,
AND NUMBER EACH COUNTY IS ENTITLED TO BY LAW.

COUNTIES.	No. in Hospital.	No. entitled to.	COUNTIES.	No. in Hospital.	No. entitled to.
Anderson.....	2	2	Hancock	2	2
Bedford	4	6	Hardeman	5	5
Benton	2	2	Hardin.....	3	3
Bledsoe.....	1	1	Hawkins	3	4
Blount.....	4	4	Haywood	7	6
Bradley	3	3	Henderson.....	5	4
Campbell.....	5	2	Henry	5	5
Cannon	3	3	Hickman	3	2
Carroll.....	4	5	Houston	2	1
Carter	2	2	Humphreys	4	2
Cheatham	3	2	Jackson.....	1	3
Chester.....	2	1	James.....	1	1
Claiborne	2	2	Jefferson	5	5
Clay	1	1	Johnson	3	2
Cocke	2	3	Knox	11	7
Coffee.....	3	3	Lake	0	1
Crockett	2	1	Lauderdale	5	3
Cumberland	1	1	Lawrence	2	2
Davidson	17	16	Lewis.....	1	1
Decatur	0	2	Lincoln.....	7	7
DeKalb	3	3	Loudon.....	1	1
Dickson	3	2	Macon	2	2
Dyer	3	3	Madison	6	6
Fayette	9	7	Marion	2	2
Fentress.....	1	1	Marshall	4	4
Franklin.....	4	3	Maury	9	9
Gibson	6	6	McMinn	3	4
Giles	6	8	McNairy	3	3
Grainger	1	3	Meigs	1	1
Greene	6	5	Monroe	5	3
Grundy	0	1	Montgomery	6	6
Hamblen	1	1	Moore	2	1
Hamilton	4	4	Morgan	2	1

TABLE XI—*Continued.*

COUNTIES.	No. in Hospital.	No. entitled to.	COUNTIES.	No. in Hospital.	No. entitled to.
Obion	4	4	Sullivan	3	3
Overton	3	3	Sumner	3	6
Perry	0	2	Tipton	4	4
Pickett	1	1	Trousdale	2	1
Polk	2	2	Unicoi	1	1
Putnam	2	2	Union	1	2
Rhea	4	1	Van Buren	1	1
Roane	5	4	Warren	4	3
Robertson	3	4	Washington ...	4	4
Rutherford	9	8	Wayne	4	3
Scott	2	1	Weakley	5	5
Sequatchie	0	1	White	2	2
Sevier	3	3	Williamson	6	6
Shelby	21	20	Wilson	7	7
Smith	4	4			
Stewart	4	3	Total	345	329

REMARKS ON STATISTICAL EXHIBIT.

The whole number of patients in charge during the term was *six hundred and thirty—three hundred and twenty-three* males, and *three hundred and seven* females, being *twenty-seven* more than for any previous term. The highest number in charge at any date was *four hundred and eighteen*, and the lowest was *three hundred and eighty-two*. The average daily number was *four hundred*. The total number of admissions was *two hundred and twenty-two*, and of discharges, *two hundred and eighteen*. The number remaining at end of term was *four hundred and twelve—four* more than of any similar previous date. The only notable fact in these figures, beyond that of the general increase in all of these features, is that the proportion of females more nearly equals that of males than in any former Report.

The table classifying population as to race, presents an increase of the colored element as compared with Reports of eight years past. The number here now, however, is considerably less than during the first nine years after the opening of that department of the institution in 1868. The cause of this diminution can only be conjectured. Whether the excitement and general agitation attending the years of the first decade after the great social change in the condition of the colored population produced a greater amount of mental disorder in that class than has subsequently prevailed, is an interesting inquiry. It is a fact of general observation, that the more acute and pronounced types of insanity are less prevalent in the African than in the Caucasian race. The probable reasons to be traced in comparative history through a long period of time, and the servile and dependent condition of the former in this country for several centuries, contributing to repress mental development and consequent susceptibility to mental disease, is too large a subject for appropriate discussion here. While the census of 1880 shows the colored population of the State to be on the increase, it is not credible that the proportion of the colored insane to the sane is diminishing to the degree apparent in the number sent to this institution, and the limited number is perhaps due to the fact that the form of insanity is less expressive, and is not so frequently brought to the attention of the county authorities.

The general exhibit, in connection with Table **XI**, shows as all former Reports for twelve years have done, that the number of

patients at the expense of the State exceeds the precise number which the law of admission (Acts of 1871) provides for. *Fourteen* counties have one or two less than their legal quota, by reason of no applications for admission, while *twenty-seven* counties have an excess of their respective quotas. In nearly every instance, the latter fact is due to patients sent under a section of the statutes relating to admissions, which, in a different form of words, has been a feature of the law since the Act of 1847, founding and organizing the Hospital, viz: patients under criminal indictment. This section has been so perverted in practice from its obvious original meaning, that it would seem to require amendment and specification of the class of subjects it was intended to comprise. Sec. 13, chap. CCV. of Acts of 1847, is as follows:

“The courts of the State shall have power to commit to said Hospital any person who has been charged with an offense punishable by imprisonment or death, and who shall have been found to have been insane at the time the offense was committed, and who still continues insane, and the expense of said person, if in indigent circumstances, shall be paid by the State.”

This section was altered in language and meaning, and as carried to the Code of 1858, (Section 1554-1558, Art. VI., Chap. I., Title 2,) is in these words:

“When the plea of insanity is urged in behalf of any person charged with a criminal offense punishable by imprisonment or death, the court shall charge the jury, that, if from the evidence, they believe the defendant to be insane, and that it would endanger the peace of the community to set him at liberty, they shall so find. Upon such finding, the court shall direct an order to the Superintendent of the Hospital for the insane, to receive and keep the defendant as other lunatics, which together with the defendant, the Sheriff of the county shall deliver to said Superintendent. When, in the opinion of the trustees and physician, such patient has recovered from his insanity, they shall cause him to be delivered to the jailer of Davidson county for safe-keeping, and immediately transmit to the Clerk of the court in which the patient was arraigned, notice of the fact. If at the next term of the court, the District Attorney wishes further to prosecute such person, the jailer of Davidson county, on notice thereof, shall deliver the person to the jailer of the county in which he was arraigned; but if the District Attorney shall not wish to further prosecute the prisoner, then he shall be discharged. The compensation of the Sheriff for such services shall be the same as

is allowed for the transportation of a convict to the penitentiary, to be paid out of the estate of the lunatic if it is sufficient; otherwise, out of the treasury of the State."

The Code of 1873, and that of 1884, (Milliken & Vertrees) copy the above literally, and in the latter the following note is appended:

"The inquiry is limited to the time of trial, and is to be made on a separate plea of present insanity. It cannot be made under the plea of not guilty, for the purposes contemplated by this statute. 3 Baxter, 258, sec. 3 Heiskell, 374. Obviously the statute relates to persons charged with felonies, not misdemeanors."

The statutes from 1858 to 1871, and subsequently, referring to the subject, justifies the remark of the foot note, viz.: that the section points to persons under indictment for offenses punishable capitally, or by imprisonment in the penitentiary—*felonies* under the penal statutes, and not *misdemeanors* punishable only by fine and incarceration in jail; and that the only plea before the court at the time of arraignment, shall be that of present insanity and consequent inability to conduct a legal defense, not necessarily insanity at the time the offense was committed and immunity therefor for that reason, though that may prove to be the fact when the question may come for trial. Provision is made that the person, on recovery, should that take place, shall be returned to stand upon the latter issue before a jury. The perversion of the meaning of the statute, to which allusion is called, is, that most of the patients now here committed by courts of criminal jurisdiction, were known to be insane persons when arrested and lodged in confinement, and were committed to jail under warrants alleging their insane and dangerous condition, and that the acts of violence charged to them as persons recognized to be insane, have subsequently been made matter of criminal indictment, and resulted in their commitment to the hospital. This practice is not only a perversion of the statutory intent, but it operates unjustly as between the various counties of the State in two ways. For example, it enables a county whose ordinary lunatics are made subjects of criminal indictment and sent by a mandatory process of a court, possibly to secure all of her insane population admission to the hospital, while in counties in which the courts do not so construe and apply

the statute, they are restricted to the general law of *one* for every *four* thousand of the population ; and, furthermore, the general law requires counties to pay the transportation to and from the hospital of the patients they may send, whereas, when an ordinary lunatic is transmuted into a criminal subject in the manner indicated, the general treasury of the State is required to bear the cost. This clearly erroneous view of the statute and its unjust and unequal operation has heretofore been alluded to in these Reports, but it is increasing, and culminated a month or two since, in the exhaustion of the appropriation from the State Treasury for the compensation of Sheriffs in delivering such patients to the Hospital. The Comptroller's Report and the message of the Governor to the General Assembly will doubtless advert to this fact. It is suggested that you recommend to the General Assembly to so revise this statute that its letter and application may not be misunderstood.

In this connection it is proper to observe, that public hospitals for the insane should, by law, be made use of by the courts of criminal jurisdiction for just such purposes as the language of the Code of 1858 imports. Persons indicted for felonies for whom the plea of insanity is urged, whether for present incompetency to confront a jury by reason of insanity, or as a plea of not guilty, might properly be committed to them for observation and investigation of their true mental condition, in order that the ultimate ends of public justice might be reached, while at the same time no scintilla of the bill of rights excepted from the powers of government need be infringed to personal endangerment, or impairment under law. When the makers and expounders of law shall call into council the faithful and conscientious expositors of medical science, and formulate maxims of procedure in cases of insanity, under the light of knowledge, both law and medicine will have less of opprobrium to bear before the forum of common sense in the adjudication of questions arising under that plea.

Continuing, with reference to hospital status of patients, Table x., shows, that one third of the population has been resident ten years. While a considerable proportion of that number are cases which are not properly dischargable with safety to the community, quite a number of them might be returned, and these accumulate from month to month. The spirit and letter of the law of admission gives preference to recent and acute cases, but there is no power given to

refuse the admission of chronic cases when the proper proceedings are filed, or to require their removal when they become harmless and incurable. If the law were judiciously amended in this respect, a more active movement of the population might be made, and a larger number of cases in the early and curable stages might be more promptly brought under treatment. It has been heretofore recommended, that the County Courts be required to empower their Clerks to draw on the county treasury at any time for funds for the forwarding or withdrawal of a patient on official notification from the Superintendent of the Hospital. Much harmful delay might be avoided if this were possible, and the suggestion of such an amendment is respectfully repeated.

Table XI, exhibiting the mortuary report for the term, is a diminished list compared with several previous terms. As usual, however, a very large proportion—five sixths of the number—succumbed to the slow ravages of chronic degeneration. The number of deaths attributable to pulmonary decay directs attention to a fact which is enlisting the consideration of pathological observers—the relationship between insanity and consumption. It is noted, that one form of disease appears in one generation and the other follows in the succeeding one—the offspring of an insane parent developing pulmonary consumption, and that of a consumptive displaying some form of insanity. Whether this be in any marked degree a law is yet a question, but acute pulmonary decay is certainly a frequent termination of chronic insanity. It is to be noted that five deaths were due to exhaustion produced by transportation to the Hospital in a state of acute insanity. Two or three of these subjects survived only a day or two, and none longer than ten days. Such results should admonish the friends of insane patients, and their advisers, of the care to be exercised in that respect.

INTERNAL DISCIPLINE AND EMPLOYMENT.

It is not deemed necessary to repeat at length in this Report a line of observation submitted from time to time in previous Reports, touching the general principles which underlie the system of management and care of the insane household. Modified as such a system somewhat must be, by the individuality and the peculiar views of him who is commissioned to institute it, and according to the facilities and resources with which he may be furnished, it is suf-

ficient to state that pursued here is in conformity to the propositions so patiently deliberated under the accumulated experience of many eminent men in the specialty, and so forcibly promulgated in frequent deliverances by the Association of Superintendents of American Institutions for the insane. Certain innovations and assumed improvements on these have a limited number of advocates among specialists of a greater or less experience in Europe and in this country, and a larger number among persons who have no practical knowledge of the subject. In the administration of a trust so inherently difficult, a wise man will not heedlessly ignore suggestions of value from any source, but, that all change is not reform, is an approved maxim. To make an asylum for the insane to seem least a place of compulsory confinement—to dispense with appliances for bodily restraint to the last degree consistent with the personal safety of the patient from self injury, or from harm to associates, and to secure freedom from injurious excitement by day and needful rest at night without the constant exhibition of hypnotic medicines—to open doors and permit egress to the exercise and pleasure grounds to as large number of patients as may be properly granted such privilege—to furnish stationery and transmit correspondence of patients when they may request it, in case the communications are coherent and not of a character to mortify and offend the receiver rather than to give information and comfort—and, in every judicious manner compatible with the express end for which patients are committed, to extend their liberty of action, and to impress them that they are in a temporary home for comfort and restoration, are paramount objects in the moral conduct of a sound and scientific asylum discipline. Either too great restriction, or too large freedom in any of these matters, with persons who have lost the power of self-control, constitute an extreme to be avoided, and theories in that regard of alleged universal applicability to the promiscuous characteristics of insanity to be found in asylums, are at once arbitrary and unphilosophic, and unwholesome and mischievous in their effects upon general and individual welfare.

To descant no further on a topic so familiar in the discussions of specialists in the care and treatment of the insane, or rehearse conclusions which should be as obviously true to the general apprehension as to those whose personal experience has derived them, one suggestion heretofore made in this connection, deserves to be

repeated, and that is, employment for patients, especially males. For those of the other sex, the seamstress work of the household is sufficient for the purpose, and it is utilized to considerable extent with evident good results for mental diversion, and for freedom of that necessary oversight to prevent the mischief which idle hands generally, and insane ones specially, are prone to work. A regular system of labor in light and agreeable indoor occupations for males would prove equally useful and beneficial in every sense. The successful accomplishment of this object would require means for the erection of a proper building, near the hospital structure, and suitably arranged for the various handicrafts adopted, but the relief to the tedium of asylum life, together with the physical and mental exercise it would afford, would amply justify the cost of its maintenance in respect to contentment as well as cure. The opinion is ventured that a proper system of employment in public hospitals for the insane, judiciously controlled and adapted, is one more promising of real advantages from them not yet fully derived, and better calculated to avert the possibility of some of the fancied and suppositious grievances alleged of them, than any of the crude suggestions which parade under the imposing name of reform.

THE NEW HOSPITAL AND HOSPITAL DISTRICTS.

The provision made by the last General Assembly for the erection of another hospital for the insane near Knoxville, and the energetic prosecution of the work by the building commissions appointed by the Governor, giving prospect of its early readiness to receive patients, is an auspicious event for the insane of the State, and it is an unmixed pleasure to be able to pretermit in this report the monotonous plaint in that behalf so frequently made. It is true, the capacity of that building will not afford all the accommodation required for the insane of the State, but it will furnish immediate relief, and it is to be hoped more will soon follow, and that ere long Tennessee will place herself abreast of her sister States of equal population in the extent of her humane and charitable institutions. By Section 6, chap. 145 of the Acts of 1883, authorizing the construction of the new hospital, your body is invested with its trusteeship and power of organization and management, under the laws applicable to this institution. No duties in that respect have yet been necessary, and it is probable the com-

ing General Assembly will perceive the propriety of dividing the territory and population of the State into separate asylum districts and providing for the Eastern Division asylum a separate local trusteeship and organization. This is the system in other States having two or more institutions, and is necessary, that each may have its assigned population and service, and that the officials of counties who have adjuvant duties in connection with hospital work, may know which institution they are in relationship with. It is necessary to proper government and administration that the new institution shall have an element of the trusteeship resident in its immediate vicinity, or in the county of its location, for the transaction of its ordinary business, and for its immediate oversight and care as provided by law. It is suggested that your report should call attention to this fact, if you deem it proper, and outline the slight amendment to the section of the general asylum code necessary to effect it. The officials in charge of the new work will probably suggest some provision similar in substance, in their Report to the General Assembly.

HOSPITAL REPAIRS AND IMPROVEMENTS.

The liberality of the last General Assembly responded to our representations preferred in every Report for the last eight years for funds for urgently needful repairs in various respects to the main building and its equipments—repairs every year becoming more requisite to preserve it from dilapidation and decay, and to renovate its heating and ventilation system, and to enlarge and remodel the bath-room and closet service for the increased population the hospital was compelled to carry. These involved two important questions, different in character, but each of the first importance—judicious economy, and general sanitary measures. The former applied more particularly to reduction in the consumption of fuel by the defective heating apparatus; the latter to complete interior reparation, together with a renewal of the entire plumbing, and the erection of additional ventilation shafts in connection with the closets, and a thorough painting interiorly and exteriorly, with minor accompanying repairs to perfect them. Section 12 of the General Appropriation Act gave fifteen thousand dollars for these works of repair, and the Report of the treasurer of the hospital appended, through whose hands the accounts for this special work,

3—Insane.

contracted by the authority and instruction of the Resident Board of Trustees, were paid, will exhibit the items of expenditure.

The first feature of this work undertaken was repair to the furnaces and boilers, and this was done as early as practicable in the term. During the early part of last summer, the entire system of steam piping was taken down in every compartment, and replaced entirely with new pipe so far as was necessary to put it in perfect order. This was done by the Chief Engineer of the Hospital aided by one assistant, and is now believed to be in more durable and efficient condition than when first erected, and credit is due to that officer for the skill and economy with which he effected this important work. To reinstate this apparatus, the work of masons, plasterers and carpenters was necessary. In addition to the former heating system, eight direct radiators have been introduced into the wards, four for sitting-rooms and four for halls adjoining lodges for secluded patients.

In August of this year, under direction of the Resident Board, estimates were made for general painting, plumbing, carpentering, masonry, papering, roof-repairing, and all incidentals, to bring the work of reparation within the scope of the appropriation made for the purpose, and being presented, instructions were given to proceed with the work. These have been quite or nearly completed to this date in all their details as projected. It is not necessary to describe every feature of repair and improvement accomplished, but it may be confidently asserted that the condition of the hospital structure in nearly every essential feature, is in superior condition, and will bear favorable comparison in regard to these with the more modern and approved buildings of like character. The bath-rooms and closets, with shafts for ventilation, complete trapping, and supply and discharge pipes, and facilities for constant purification of the latter, may be remarked as equal and perhaps superior in some respects, to any to be found in public institutions in this country.

The special repair and improvement fund has not enabled us to effect one feature of alteration in the hospital structure greatly needed, the substitution of iron or stone fire-escape stairways to each wing for the present wooden staircases. The fatal results of calamities by fire to public institutions occupied by helpless populations, as recorded in every season's history, renders this a matter

of great anxiety. The facilities for the prevention of a disaster so horrifying, always imminent in large public buildings under the greatest possible vigilance, would be greatly promoted by the expenditure of a few hundred dollars, and this building will not be perfect for its objects, nor satisfy a just public sentiment, until its population is furnished with such safeguards from casualties of that character.

REPORT OF THE TREASURER AND HOSPITAL FINANCES.

The exhibit of the receipts and disbursements and the condition of hospital finances, presented in the report of the Treasurer of the Hospital, will be found satisfactory, both as to the annual regular cost of maintenance, and in the fact of a considerable balance in his hands. Four years ago he was forced to announce a slight deficit on account of reduced appropriations from the State Treasury, and two years ago, by reason of still further reduction in the sum appropriated for the term then expired, a very considerable deficit, amounting to upwards of twenty-five thousand dollars. These facts were set forth in the report for 1882, and in Section 11 of the General Appropriation Act of 1883, the sum asked for in Report of 1882 was placed at the order of the Treasurer of the Hospital, "for outstanding accounts of the Hospital for the Insane, for supplies from July, 1882 to December 19, 1882." This amount, with the cash reported on hand in the hospital treasurer's report of 1882, at the end of the term, aggregated twenty-eight thousand and twenty-six dollars and ninety-three cents (\$28,026.93,) and was disbursed by the treasurer in the liquidation of these accrued claims. The tabulation of this deficiency disbursement under their various heads, is shown in the first division of the annexed report of the hospital treasurer.

The second division of that Report exhibits the disbursements of the Special Improvement Fund (section 12, App. Act of 1883) of fifteen thousand dollars under their appropriate heads, leaving an insignificant balance of a few cents to the credit of the Hospital.

The third division of the Report presents the receipts from all sources to the ordinary Hospital Treasury, and the disbursement of the same for the maintenance of the institution for the biennial term December 19, 1882, to December 19, 1884. In the payment of Hospital accounts in 1882, the former Treasurer of the Hospital had overdrawn from the State Treasury \$2,046.24 as shown by his

report as State Treasurer. This sum was replaced by the present Treasurer of the Hospital, and reduced the amount of regular hospital appropriations in section 1, App. Acts of 1883, to \$111,-953.76.

The total disbursements for two years support has been one hundred and thirty-eight thousand, nine hundred and forty-five dollars and sixty-nine cents, (\$138,945.69) or at the rate of sixty nine thousand, four hundred and seventy-two dollars and eighty-four cents per annum (\$69,472.84); or at the rate of one hundred and seventy-three dollars and sixty-eight cents (\$173.68) per patient per annum, or a daily per capita cost of forty-seven cents (47c.) A balance to hospital credit of \$8,986.86 remains in the Treasury.

By comparison with the financial exhibit of two years ago, it will be seen, that with an increase of three in the daily average of population this term, the annual cost of support has increased about five hundred dollars, demonstrating that year by year with ordinary seasons and prices for supplies, the cost of support does not greatly vary.

THE SEWER DAMAGE SUIT.

For ten years past, H. B. Hill *et als.*, owning and residing upon property in the rear of the hospital premises, have preferred a claim for damages against the Hospital on account of offensive sewerage. These reports have been burdened with the subject, and in 1876 a jury of view appointed by the complainants, on the one part, and myself on the part of the then Resident Board, assessed the damage at one thousand dollars, and report of that fact was made in 1877. Two years ago, Hill *et als.* instituted suit in the Circuit Court of Davidson county for damages to the sum of \$1,000, and said suit has been pending until this year. In August last, at a meeting of the Resident Board, the President and Superintendent were instructed to compromise the suit by tender of the amount claimed and the accrued court costs, and if accepted, to pay the same out of the Special Improvement Funds. This has been done, and the item of \$1,130 in that division of the Treasurer's report, represents the transaction. The complainants, in consideration of this settlement, have signed an agreement foregoing for themselves, heirs, and assignees forever, any further claim on said behalf, and this paper is on file at the Hospital.

STEWARD'S REPORT OF FARM AND GARDEN PRODUCTS.

The report of the Steward of the farm and garden yield for 1883 and 1884, is presented below. About two hundred acres of land have been under cultivation exclusive of the garden. The yield of the former year was less than usual by the depression of prices in some leading staples. That for the present year, shows an average of the farm productions for current years. With the exception of the amount represented in the Treasurer's statement of receipts in the item of articles sold by the Steward, this produce of the farm and garden is consumed as supplies by the household. In the latter part of 1883 Mr. Geo. Richards, who had so long served in the capacity of overseer of the farm, resigned that position, and its duties have since been performed by the Steward.

1883—FARM AND GARDEN REPORT.

Dr.—To labor.....	\$1,860	80	
" seeds.....	223	66	
" land plaster.....	41	50	
" repairing farm implements.....	79	18	
" stock hogs.....	55	20—	2,260 34
<hr/>			
Cr.—297 barrels of corn.....@ \$2 00	594	00	
77 bushels wheat.....	85	65	45
1,200 bundles fodder.....	1 00	12	00
61½ tons clover hay (No. 1)	10 00	615	00
38 " " (No. 2)	9 00	342	00
24½ " " (2d crop)	8 00	198	00
1½ " millet hay.....	8 00	12	00
10½ " mix'd "	9 00	92	25
Wheat straw.....		15	00
1,520 bushels sweet potatoes...	50	760	00
738 " Irish "	40	295	20
150 " Onions.....	80	120	00
129 " Beets (table)..	45	58	05
332 " " (stock)..	20	66	40
47 " carrots.....	30	14	10
79 " green peas.....	50	39	50
<hr/>			
Amount carried forward....	\$3,298	95	\$2,260 34

Amount brought forward.....		\$3,298 95	\$2,260 34
146½ bushels snap beans....	55	80 57	
16 " lettuce	60	9 60	
133 " squash.....	30	39 90	
6½ " salsify	80	5 20	
109 " parsnips	40	43 60	
450 " turnips.....	40	180 00	
450 " salad..	80	360 00	
350 " tomatoes.....	40	140 00	
16½ " Lima beans... 1	25	20 31	
47 pecks okra.....	17	7 99	
933 bunches asparagus.....	5	46 65	
409 " celery.....	8	32 72	
67 " London leek...	8	5 36	
1,540 " onions.....	4	61 60	
390 " shallots.....	3	11 70	
575 " raddish..	3	17 25	
23 " rhubarb.....	5	1 15	
2,870 dozen green corn.....	7	200 90	
400 cantaloupes.....	5	20 00	
210 watermelons.....	8	16 80	
610 head cabbages.....	5	30 50	
500 pumpkins.....	3	15 00	
56 gallons strawberries....	30	16 80	
250 pounds grapes.....	5	12 50	
pepper, sage and parsley....		11 50	
2 bbls. cucumber pickles	7 00	14 00	
3 " tomato "	3 00	9 00	
Filling ice-house		13 00	
10,436 lbs. pork (net).....	7½	782 70	
Grazing 108 head cattle, at \$1 25			
each per month.....		810 00—	6,315 25
Balance to credit.....			\$4,054 91

1884—FARM AND GARDEN.

Dr.—To labor.....	\$1,632	20	
" seeds.....	241	67	
" land plaster.....	14	25	
" repairing farm implements.....	34	75	
" stock hogs.....	34	60	\$1,957 47
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Cr.—320 barrels corn.....@	\$2 25	720	00
806 bushels wheat.....	80	644	80
218 " oats.....	30	65	40
2,640 bundles oats.....	1 25	33	20
12 loads cut corn.....		20	00
58½ tons clover hay.....	11 00	643	50
39½ " millet "	12 00	471	00
7½ " mixed "	9 00	67	50
Wheat straw.....		40	00
1,055 bushels sweet potatoes....	60	633	00
760 " Irish "	50	380	00
102 " onions	65	66	30
133 " beets (table)....	45	59	85
200 " " (stock)....	20	40	00
16 " carrots.....	40	6	40
106 " green peas.....	50	53	00
102 " snap beans.....	65	66	30
21 " lettuce	60	12	60
119 " squash.....	35	41	65
8½ " salsify.....	1 00	8	50
31 " parsnips	40	12	40
183 " turnips.....	40	73	20
395 " salad.....	1 00	395	00
409 " tomatoes	70	286	30
12 " Lima beans.....	1 50	18	00
1,212 dozen corn.....	8	96	96
64 pecks okra.....	17	10	88
306 bunches asparagus.....	5	15	30
185 " celery.....	10	18	50
58 " London leek.....	10	5	80
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Amount carried forward.....	\$5,005 34	\$1,957 47.	

Amount brought forward.....		\$5,005 34	\$1,957 47
1,310 " onions.....	3	39 30	
201 " shallots.....	2	4 02	
425 " raddish	2	50	
60 " rhubrrb... ..	5	3 00	
350 cantaloupes.....	6	21 00	
280 watermelons.....	10	28 00	
2,125 heads cabbage.....	6	127 50	
900 pumpkins.....	5	45 00	
107 gallons strawberries.....	30	32 10	
211 pounds grapes.....	5	10 55	
Pepper, sage and parsley		11 50	
3 bbls. cucumber pickles...	7 00	21 00	
1 " tomato " "		3 00	
8,110 lbs. pork (net).....	5½	426 05	
Grazing 99 head cattle 6 months at			
\$1 50 each per month.....		891 00—	\$6,676 86
Balance to credit.....			\$4,719 39

DOMESTIC INDUSTRY.

The subjoined transcript from the Matron's books presents the amount and character of work performed by the seamstress, and under her direction, by female patients. Such work is both a solace and diversion to the latter, and is an important feature in the economy of the hospital:

REPORT OF SEAMSTRESS WORK.

Dresses.....	592	Pillow cases.....	729
Drawers	706	Sacques.....	50
Aprons.....	267	Skirts.....	603
Chemises.....	472	Clothes sacks.....	81
Gowns.....	237	Bolster cases.....	12
Flannel skirts.....	20	Window curtains.....	344
Table cloths.....	283	Suspenders.....	133
Roller towels.....	282	Pants.....	35
Hand towels.....	36	Napkins	132
Toilet covers.....	17	Spreads.....	236
Quilts.....	67	Dress skirts.....	10
Coats.....	33	Under vests.....	28
Bonnets.....	38	Jackets.....	209
Bedticks.....	341	Shirts.....	660
Pillowticks.....	97	Sheets.....	985
Hose spun and knit.....	86		
Socks spun and knit.....	30		
			<hr/> 7,851

ACKNOWLEDGEMENTS.

Regular Sunday afternoon chapel service has been performed with acceptability by Rev. Lewis Powell, who retired as Chaplain in October 1883, and Rev. T. A. Kerley, who succeeded him, and remains yet in the position. During the period they have been assisted by Bishop McTyeire, Rev. Dr. Fitzgerald, Rev. Dr. Cunyng-ham, Rev. Dr. R. K. Brown, the late Rev. Dr. Sawrie, Rev. L. C. Bryan and Rev. A. P. McFerrin, and the aid of these gentlemen is properly appreciated.

Dr. John A. Beauchamp, as Assistant Physician, and Mr. W. B. Clark, as Steward, still occupy the responsible positions they have so long held, and their continued faithful and valuable services are entitled to warm recognition.

The name of one who long filled a most important position in the service of the institution with remarkable ability and fidelity, and frequently mentioned in this connection in terms of sincerest commendation, when this brief testimonial shall be written, will be called officially no more, but many years will pass before her memory will fade among those who knew her efficiency and worth, Laura Vestal, who had been Matron of the Hospital for thirteen years, died June 26, 1883, in the forty-eighth year of her age. Though prostrate for several months, she verily died at her post, for in the last days of existence her charge was the subject of anxious care. By nature she seemed commissioned for such work, and knew nothing but its duties. Her character was illustrated by rare and varied excellence, and her life was singularly useful in the peculiar and exacting sphere in which it was cast. It was spent in a sequestered walk and with unassuming demeanor, and no sounding obituary proclaimed its virtues to the world; but its value in the scale of good works and noble devotion may far out-weigh "in the great Taskmaster's eye," lives more ostentatious. These feeble lines might recount at length the deep affection with which she inspired the large number whose afflictions had been soothed by her sympathizing care and gentle ministration, and for whom she became a mother and a sister, and the poignant grief they felt in her death, but the pen forbears. Its subject was so meek and self-forgetful, that could her "dull cold ear" now catch these words of tribute, it would shrink from the recital. By consent of the Resident Board, the writer, at his own cost, has placed in the walls of

the institution a marble tablet to the memory of this truly christian woman, and adorned them also with her portrait.

The duties of the Matronship vacated by the death of Mrs. Vestal have been divided, and assigned in part to Mrs. John A. Beauchamp who had previous experience in the hospital service, and to Mrs. Ada L. Payne, who had also served in a subordinate capacity for several years, and a proper recognition is due to their efficiency.

Mention has already been made of the chief Engineer, Mr. W. G. Bowers, in the reference to the improvements in his department, and general credit is due to him and to his assistant, Mr. G. C. Richards; and without further personal allusion, it may be said that the internal and external corps of employees, with rare exceptions, have given satisfaction in their respective departments of labor.

In submitting a report for the biennial term described, which has, in some respects, been the most anxious and laborious passed, grateful acknowledgment is made to the President and members of the Resident Board for the confidence they have extended and the prompt and zealous manner in which they have aided in the work of the institution, and to the General Board for the presence of every member at stated biennial meetings, for the faithful and intelligent manner in which it has investigated my performance of duty and the affairs of the institution, and the generous commendation it has awarded.

Your council board misses to-day a venerable face that for fourteen years has never before been absent—that of one whose last interview with me but a few days before he was stricken, concerned the interests of the Hospital and his anticipated presence at this meeting. The life of George W. Jones, crowned with years and with honors, was more complete and rounded in every public and private relation than that of most men—and his death “like as a shock of corn cometh in in his season,”—was recognized by the country as the removal of a light and landmark of conspicuous usefulness. To this institution, with whose welfare he had so long been identified, it was an irreparable loss, and your official action will doubtless give appropriate utterance to the sentiment. My own sense of bereavement in the death of one so intimately associated and endeared, will not be trusted to public expression.

Respectfully submitted,

JNO. H. CALLENDER.

REPORT OF THE TREASURER.

OFFICE OF TREASURER OF HOSPITAL,
December 19, 1884.

To the Board of Trustees of the Tennessee Hospital for the Insane:

Herewith I have the honor to submit statements of receipts and disbursements from December 19, 1882, to December 19, 1884:

The following is a statement of receipts and disbursements on account of drafts outstanding December 19, 1882. [See Section 11, Acts 1883.]

RECEIPTS.

To cash on hand Dec. 19, 1882.....	\$2,428 85	
To amount of State appropriation.....	25,598 08	
		<hr/>
Total Receipts.....		28,026 93

DISBURSEMENTS.

Amusements.....	\$ 5 50	
Beef, Mutton and Pork.....	5,005 28	
Boots and Shoes.....	265 05	
Blacksmithing.....	43 55	
Brick, Lime and Sand.....	11 10	
Butter, Eggs and Fowls	32 50	
Coal and Wood.....	5,579 01	
Comforts, Blankets and Spreads.....	472 00	
Dry Goods and Clothing.....	3,358 97	
Farm Implements and Repairing same...	33 20	
Glass, Putty and Paints.....	152 82	
Groceries	8,158 33	
		<hr/>
Amounts carried forward.....	\$23,117 31	28,026 93

Amounts brought forward.....	\$23,117 31	28,026 93
Hats.....	79 75	
Hardware.....	28 75	
House Furnishing Articles.....	909 58	
Hay, Corn and Bran.....	349 95	
Laundry supplies.....	309 40	
Medicines, Liquors & Surgical Instrm'ts..	807 80	
Land Plaster.....	27 50	
Queensware.....	56 50	
Repairing, general.....	614 01	
Repairing, Vehicles, Harness, etc.....	108 65	
Seeds	8 25	
Stationery, Printing, etc.....	56 75	
Stoves, Furnaces, etc.....	1,031 42	
Tinware.....	25 10	
Treasurer's Commissions.....	209 41	
Tolling, Stabling, etc.....	114 80	
Undertaker's and Burial Account.....	172 00	
<hr/>		
Total disbursements.....		\$28,026 93

The following is a statement of receipts and disbursements of Special Improvement Fund, Section 12 Acts 1883:

RECEIPTS.

To amount of State appropriation.....	\$15,000.00	
<hr/>		
		\$15,000 00

DISBURSEMENTS.

Boiler and furnace repairs.....	\$ 1,502 34
Steam piping.....	648 73
Painting exterior walls and verandas, under contract.....	2,196 64
Painting material for interior work.....	1,315 88
Plumbing material and work for new bath-room, closets, etc., under contract.....	2,746 00
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Amounts carried forward.....	\$8,409 59	\$15,000 00
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Amounts brought forward.....	\$8,409 59	\$15,000 00
Carpentry and material, under contract...	2,056 00	
Paper hanging, under contract.....	850 70	
Roofing and gutter pipes.....	531 10	
Lumber.....	181 91	
Lime and sand.....	276 00	
Plastering.....	600 75	
Brick.....	65 25	
Masonry.....	262 00	
Radiators.....	297 00	
Fan, engine and repairs, under contract...	81 20	
Cut stone.....	34 80	
Hardware.....	11 17	
Architect plans.....	100 00	
Settlement of sewer drainage claim.....	1,130 00	
Treasurer's commissions.....	112 07—	\$14,999 54
Balance on hand.....		\$ 46

The statement below will show the general receipts and disbursements for ordinary support for two years from December 19, 1882, to December 19, 1884:

RECEIPTS.

To amount received from State appropriation, less amount deducted to cover overdraft of former Treasurer of \$2,046.24.....	\$111,953 76
To amount received from paying patients	29,886 77
To amount received from articles sold by steward.....	6,092.02—\$147,932 55

DISBURSEMENTS.

Advertising.....	\$ 27 25
Amusements.....	10 25
Beef, mutton and pork.....	17,746 32

Amounts carried forward..... \$17,783 82 \$147,932 55

Amounts brought forward.....	\$17,783 82	\$147,932 55
Boots and shoes.....	1,213 25	
Blacksmithing.....	180 20	
Brick, lime and sand.....	386 05	
Butter, eggs and fowls.....	1,682 99	
Coal and wood.....	12,264 92	
Comforts, blankets and spreads	1,726 23	
Dentistry.....	105 00	
Dry goods and clothing.....	9,448 76	
Expressage and freight.....	63 57	
Farm implements and repairing same....	113 93	
Farm labor, extra.....	130 64	
Flower-pots, vases and shrubbery.....	166 95	
Feed cutter and power.....	120 00	
Fees, attorneys'.....	27 80	
Glass, putty, paints and oils.....	356 81	
Groceries.....	28,331 41	
Hats.....	129 34	
Hardware.....	590 64	
House-furnishing articles.....	3,494 88	
Horses, mules and hogs.....	539 45	
Hay, corn and bran.....	2,502 23	
Insurance.....	1,875 00	
Ice.....	77 20	
Land-plaster.....	55 75	
Laundry supplies.....	907 94	
Medicines, liquors and surgical instrum'ts	2,898 04	
Postage and postoffice box rent.....	84 68	
Queensware.....	332 05	
Repairing, general.....	4,465 31	
Repairing vehicles, harness, etc.....	331 45	
Refund to paying patients.....	592 15	
Returning elopers.....	65 15	
Returning patients home.....	25 75	
Salaries and wages.....	40,333 88	
Seeds.....	342 33	
Stationery, printing, etc.....	282 33	

Amounts carried forward.....\$134,027 88 \$147,932 55

Amounts brought forward.....	\$134,027 88	\$147,932 55
Stoves, furnaces, etc.....	866 64	
Sundries.....	194 25	
Tinware.....	501 54	
Transportation of Charitable Institutions		
Committee from city.....	155 75	
Traveling expenses of steward.....	50 35	
Treasurer's commissions.....	1,015 06	
Trustees' per diem and mileage.....	1,062 22	
Tolling, stabling, etc.....	402 80	
Undertakers' and burial account.....	641 45	
Wheelbarrows.....	27 75	\$138,945 69
		<hr/>
Balance on hand.....		\$ 8,986 86

Respectfully submitted,
ATHA THOMAS,
Treasurer of the Hospital.

REPORT OF COMMITTEE OF AUDIT.

The undersigned committee of the General Board of Trustees of the Tennessee Hospital for the Insane, appointed to examine and audit the accounts and vouchers of the Treasurer and Superintendent thereof, certify that they have carefully examined the vouchers and receipts in said offices, and find them accurate and correct.

T. NIXON VANDYKE,
F. W. EARNEST,

Committee of Board of Trustees,

HOSPITAL FOR THE INSANE,
Near Nashville, January 2, 1885.

APPENDIX.

4—Insane.

APPENDIX.

BY-LAWS AND REGULATIONS

FOR THE GOVERNMENT OF THE
TENNESSEE HOSPITAL FOR THE INSANE.

GENERAL RULES.

All subordinate officers and employees are appointed by, and are under the control and direction of, the Superintendent, and accountable to him for the proper discharge of the duties assigned them, and he is responsible to the Trustees for their good character and fidelity.

In making engagements with individuals to take charge of the patients of this institution, it is to be distinctly understood that the hospital contracts for their whole time, and they are not to leave the premises or their duties, nor engage in work of their own, without express permission from the Physician.

They are expected to perform with cheerfulness, and to the best of their abilities, *all duties* that may be assigned them by the officers of the house, and at all times, and in all places, to do what they can to promote the comfort and happiness of the patients and the prosperity of the institution.

They are to treat the patients, and all having business at the institution, and each other, with respect and courtesy. They are to be neat in their dress, avoid wearing their hats in the house, going in their shirt sleeves (unless when specially at work in the wards), lounging on settees, the use of profane language, and every act unbecoming their position. They must not smoke in the wards or rooms of the institution.

When officers or visitors are present in the wards, attendants will rise, accompany them, and be prepared to give such information as may be required. When abroad, they are to avoid reporting the conduct, conversation, names or peculiarities of patients, and are never to speak disrespectfully of the institution or any of its officers; and this is to be strictly observed at all times, unless in judicial proceedings.

No one belonging to the west wing, nor any male employed on the premises, is to enter the east wing on any pretense, or go upon the grounds appropriated to the female patients, without express permission.

It is so important that patients should be kept at some pleasant employment—work of some kind, walking or other amusement—that no suitable opportunity is to be neglected to induce them to thus occupy themselves.

DUTIES OF ATTENDANTS.

1. In all their intercourse with the patients, the attendants are to treat them with respect and civility, address them in a mild and gentle tone of voice, and avoid violence and rudeness of every kind. All civil questions are to be promptly answered. They are urged to keep cool under every provocation; are never to scold, threaten or dictate authoritatively; but when they desire any thing done by a patient, are to make a *request in a respectful manner*.

Force, unfortunately, has sometimes to be used in every institution for the insane; but tact and kindness render its employment comparatively rare; and when it must be resorted to, the manner of using it may be made to take away nearly all of its offensiveness. A pleasant smile, kind and respectful manner, and sympathizing words, will go far to convince, even the most excited patient, that what is done is done from good motives, and that he has nothing to fear from those around him. The opposition of patients, and much of their violence, very often arises from delusions that lead them to suppose that they are to be injured in some way; and every attempt, either to put them in a room, to give food, bath or medicine, or do anything about their persons, if made with angry looks, cross words, or violence, only tends to confirm their false ideas, and make their resistance more obstinate and determined. The truth of these views is unquestionable, and is confirmed by convalescent

patients, who are able to describe their feelings and motives after being highly excited.

Under no circumstances will an attendant be excused for striking a blow, or laying violent hands upon a patient, unless in the clearest case of self-defense, or to prevent his committing serious injury to himself or others.

Attendants should never manifest fear of patients, but while treating them with firmness and decision, at the same time let it be with mildness and kindness. They must take every pains to inspire patience with respect for the officers, and to convince them of the *true* character of the institution. They are promptly to interfere when patients are disposed to quarrel, and by kind words, and engaging their attention with other objects, prevent difficulty. A kind word, fitly spoken, will prevent many a scene of excitement, just as a harsh remark, an angry look, an unkind allusion, or a rude act on the part of an attendant, may be the origin of a difficulty which will last for hours.

They are to carefully avoid talking with patients on the subject of their delusions, and, as much as lies in their power, they should endeavor to prevent others from doing so.

They must never allow patients to be laughed at, ridiculed, or harshly addressed, on account of the peculiarities of their behavior. No greater proof of want of correct feeling could be given than indulging in levity in reference to the afflictions of our fellow-men.

Deception is always to be avoided, and particular care is to be taken that promises are not made that cannot be performed.

They are not to furnish writing materials or books to the patients, nor make purchases for them, without consulting the Physician.

All letters, parcels or packages (except clothing), to or from patients, are to pass through the hands of the Physician. When a patient has a forbidden article of any kind, it is the duty of the attendant promptly to report it.

All damages done to patients is to be entered on a book provided for the purpose, and delivered to the steward every evening.

2. Each attendant is responsible for every patient under his or her care, and is expected, at any moment, to say where each individual can be found. If any one is discovered to be missing, report is to be immediately made to the Physician, and the proper search must be instantly made.

One attendant must always be present with the patients of each ward, unless express directions are given to the contrary. When it is necessary to leave, except for a temporary purpose, it must be known that a substitute fills the place. When patients remain much in their rooms, the attendants are to find reasons for frequently calling to see how they are engaged, or if they require any particular attention.

3. The attendants will arise punctually at the ringing of the morning bell, and take charge of their wards before the night watch goes off duty. They will then open the chamber doors, give the patient a kind greeting, and see that they are properly dressed, well washed, and have their hair and clothes neatly brushed.

Immediately after opening the doors the chamber articles must be removed—never without being covered—from the room, and having the bedding laid on the chairs for airing. They will then commence putting the room in order, and after the beds and bedding have been sufficiently aired, have them properly made up for the day.

Every part of the Hospital is to be prepared for inspection at the Physician's visit, which will be commenced not later than 9 o'clock every morning.

4. All wards and rooms are to be kept scrupulously neat, clean, and well ventilated at all times.

Whenever any unpleasant effluvium is discovered, the cause is to be searched for and promptly removed, day or night.

Whenever any part of a parlor, chamber or hall is accidentally soiled, it is to be cleaned at once.

Whenever a bed or furniture of a room has been disarranged, it is to be promptly put in order.

The halls and parlors must be swept as often in each day as is necessary to keep them clean.

The spittoons are to be kept perfectly clean, and frequently emptied.

The water-closets, urinals, etc., are to be carefully watched, and prevented from impairing the purity of the air in the wards.

MEALS.

5. The attendants will see that the patients are always up and ready for breakfast at the prescribed hour.

Those patients who take their meals in their rooms are to be served promptly, and, whenever necessary, an attendant is to remain with them while they are eating.

Care is to be taken that no knife, fork, or other article that could be used as a weapon, is left in the ward or taken from the tables. When any such article is missed, prompt measures must be taken for its recovery.

The Steward and Matron will visit all the dining rooms during the hours for meals, and have a supervision of the mode in which patients have their meals served to them in their wards or in their rooms. All deficiencies are to be promptly reported to these officers, and their instructions on these points are to be strictly attended to.

Patients are never to be forced to take food but in the presence of a Physician, Steward or Matron, and never but by the express direction of one of the Physicians.

ADMINISTRATION OF MEDICINE.

The utmost gentleness is to be used in giving medicine, and every proper means employed to induce the patient to take it willingly. When it is positively refused, and the Physician believes its administration important, either the Physician, Steward or Matron must be present before any force can be used. Any unexpected effect in the operation of medicine is to be promptly reported.

When a patient complains of being sick, or is supposed to be so, the facts should be reported without delay to the Physician.

BATHING.

Unless a special exemption is made by the Physician, every patient will take a *warm bath* once a week—the temperature to be such as is most grateful to the patient.

SHAVING.

The shaving of the patients is to be done by the attendants in each male ward, at stated intervals, and patients who desire to be shaved more frequently are to be gratified. Great care is to be taken that no injury is done with the razors, all of which are to be carefully kept by the attendant. When the Physician has allowed a patient to shave himself, an attendant must always be present, and no other patient in the room at the time.

WALKING OUT WITH PATIENTS.

It is desirable that every patient, not too feeble or too sick, should walk out about the grounds at least once in each morning and once in each afternoon. Immediately after the physician's morning visit, in suitable weather, one attendant in each ward should prepare to go out with as many patients as it is proper to take at once—the other attendant remaining to do the work of the ward. Upon the return of the first company, a second should go out, and so on, till all in the ward have had the proper amount of exercise. Those too feeble to take the ordinary walk should be taken to the airing courts. In the afternoon the same plan should be adopted, and continued until near tea time.

When walking out with the patients the attendants will, as far as possible, consult their wishes in regard to the direction of the walk, etc.; will be vigilant to keep them together, and prevent their strolling. They will take care that those from different wards mix as little as possible, and that no more are taken in one company than can be properly attended.

When attendants are walking out with patients they will not depart from the exercise grounds, and will avoid all dangerous places. They will strictly avoid paying any visits when they have patients with them, or entering private houses for any purpose. The Superintendent alone gives the privilege of the grounds, or permission to patients to pay visits.

PATIENTS AT WORK AND OUT-DOOR ATTENDANTS.

Such male patients as are deemed suitable will be allowed by the Superintendent or Assistant Physician to go out to work, under the care of the out-door attendants; but no one is to be taken out of the wards for this purpose, unless some general permission of this kind has been previously given. The attendants will take especial care that the patients do not engage in improper kinds of labor, and that they do not overwork themselves.

These patients must always be kept under observation, and when a strong disposition to escape is manifested, they must be returned to the ward, or kept constantly near the attendant.

All attendants are expected to go out and work *with* patients, whenever it is deemed desirable for them to do so; and when thus engaged, they will carefully avoid every appearance of superintend-

ing patients, but must work with them, and induce them to labor by persuasion and example, and not by giving orders.

RETIRING AT NIGHT.

Patients are not to retire before 8 o'clock P. M. without permission, unless in case of sickness or fatigue. After the ringing of the bell, at half-past 8 o'clock P. M., patients may retire in every part of the house.

Attendants are expected and required to be in their rooms at 9 o'clock; fifteen minutes after 9 o'clock no light can be kept burning in any room, unless in case of sickness. When patients lodge in a different part of the building from that in which they pass the day, it is the duty of the attendant having them in charge during the day, to take them to their rooms and see them comfortably in bed; and it will also be the duty of the attendant in the part of the building where they sleep, to see them up, dressed and washed, ready to be returned to the ward where they pass the day, in seasonable time.

Before closing the door the attendant should be certain the patient is in the room, and wish him good night. The door is then to be carefully locked and tried.

No patient's door is ever to be left unlocked at night without special permission from the Physician.

RESTRAINING APPARATUS.

No restraining apparatus must, under any circumstances, be applied without express direction of the Physician.

Seclusion in a private room, and the personal care of attendants, must be relied on till the Physician can be found.

The escape of patients is always exceedingly annoying, and although such events will occasionally occur, it must never be allowed from neglect.

Attendants should always be doubly watchful of patients known to be disposed to escape.

When it is clearly made out that a patient has escaped from the carelessness or neglect of an attendant, the expense of recovering the patient will be charged to the attendant, at the discretion of the Superintendent.

LEAVE OF ABSENCE.

To those who perform their duties faithfully, it is desirable to allow as much relaxation and as much absence as is consistent with the kind of service required and the welfare of the patients; but whenever the absence of attendants is deemed likely to be prejudicial to patients, they are expected to remain at their posts.

Leave of absence is granted only by the Superintendent.

NOTICE TO LEAVE AND DISCHARGES.

Whenever any one employed wishes to give up his situation, he is required to give one month's notice of his intention.

Whenever any one is discharged, however, for violation of rules or improper conduct, no notice will be given or payment made, except at the option of the Superintendent.

APPENDIX.

TERMS AND MODES OF ADMISSION OF PATIENTS

INTO THE

Tennessee Hospital for the Insane.

AN ACT to Prescribe the Terms and Modes of Admission of Patients into the Tennessee Hospital for the Insane.

SECTION 1. *Be it enacted by the General Assembly of the State of Tennessee, That no person shall be received as a patient in the Hospital except he or she have legal citizenship and residence in the State.*

SEC. 2. Insane persons may be placed in the Hospital by their legal guardians, or by relations or friends, in case they have no guardians, or by a Justice of the Peace, if the person be proved to be insane ; *but never, under any circumstances, except upon the statement of at least one reputable physician, based upon personal examination, and certificate thereto, made and dated within one month of the presentation of the patient at the Hospital.*

SUCH CERTIFICATE SHALL BE SIGNED AND SWORN TO, AND ATTESTED BY A JUSTICE OF THE PEACE OR JUDGE OF ANY COURT OF RECORD.

NON-PAYING PATIENTS.

SEC. 3. Non-paying patients, to the number of three hundred, may be admitted to the Hospital, one to every four thousand of the population of each county, under these conditions :

The county from which such patient is sent shall pay the transportation to the Hospital, and, during the stay of such patient, the Hospital shall furnish clothing and all proper Hospital maintenance and treatment. When the Superintendent of the Hospital shall notify the County Court Clerk of the propriety or necessity of removing such patients, it shall be done at the expense of the county, the charge being limited to the actual expenses. Such patients shall be removed whenever, in the judgment of the Superintendent and President of the Board of Trustees, it may be judicious and proper for the interest of the Hospital, of the patient, and of the community.

SEC. 4. For the admission of non-paying patients the following proceedings shall be had:

CITIZEN'S CERTIFICATE.

1. Some respectable citizen of the county to which the patient belongs shall file with a Justice of the Peace of the county, a statement in writing substantially as follows:

STATE OF TENNESSEE, ——— COUNTY.

The undersigned, a citizen of said State and county, hereby states that is insane; his insanity is of less than two years' duration (or that his being at large is dangerous to the safety of the community); that he is in needy circumstances, and has a legal settlement in said county, and is a citizen of the State of Tennessee.

These facts can be proved by and (naming at least two persons, one of whom shall be a respectable physician).

Dated this day of, 18....

2. The Justice shall issue subpoenas on the persons named as witnesses, and such other persons as he may think proper, requiring them to appear before him at a specified time, to testify concerning the facts set forth in said statement. Subpoenas may also issue for witnesses in behalf of the person alleged to be insane.

PHYSICIAN'S CERTIFICATE.

5. If, after such inquest, the Justice is satisfied of the truth of the allegations set forth in the statement, he shall require the med-

ical witness forthwith to make out a certificate, such as is herein set forth, substantially :

"I,....., a practicing physician of the county of, State of Tennessee, hereby certify that I have this day personally examined, alleged to be insane, and pronounce so; is years of age; is the subject of no infectious disorder; the disease is of years' duration; is not the subject of epilepsy; has ever attempted to commit violence onself or others; the medical treatment has been"

MAGISTRATE'S INQUEST.

4. The Justice shall certify to his inquest, and attest the signature of the physician under seal. The following words substantially shall be his certificate :

"STATE OF TENNESSEE, COUNTY.

"I, the undersigned Justice of the Peace in and for the county aforesaid, hereby certify that I have held an inquest on, of said county, a person alleged to be insane, according to law. I am satisfied that he is insane, on competent medical testimony; that he is a fit subject to be sent to the State Hospital for the Insane to undergo treatment therein, as an object of the bounty of the State. I am further satisfied that his being at large is injurious to himself and disadvantageous to the community.

"Witness my hand, this day of, 18..."

Immediately after the inquest, the Justice shall transmit to the Clerk of the County Court a certificate of these proceedings. The Clerk shall file the same in his office, and immediately transmit a copy of the same to the Superintendent of the Hospital, accompanied with an application for admission of the patient therein named to the same. Upon receipt of this application, the Superintendent shall immediately advise the Clerk *whether* and *when* the patient can be received.

CLERK'S WARRANT.

5. The Clerk shall thereupon, in due season for the conveyance of the patient to the Hospital by the time appointed, issue his warrant to any suitable person for the conveyance of the patient to the Hospital, in the following terms, substantially :

STATE OF TENNESSEE, COUNTY.

"To..... : Whereas, all the proceedings necessary to entitle to be admitted into the Tennessee Hospital for the Insane, as a *non paying patient*, have been had according to law, you are hereby required forthwith to take said person and convey him to said Hospital, and, after executing this warrant, make due return of the same to this office.

"Witness my hand and seal of office, at office, thisday of , 18...

"....., *Clerk.*"

6. Upon receiving the patient, the Superintendent shall endorse upon the warrant a receipt, as follows:

"TENNESSEE HOSPITAL FOR THE INSANE—Received the patient named in the within warrant.

"....., *Superintendent.*"

PAYING PATIENTS.

SEC. 6. Paying patients may be admitted into the Hospital for the Insane under the following conditions, etc.:

TREASURER'S RECEIPT, ETC.

1. Upon the presentation of the patient, there shall be produced to the Superintendent the receipt of the Treasurer of the Hospital for the Insane for thirteen weeks' charge in advance (or this amount shall be paid to the Superintendent).

FORM OF BOND.

2. A bond of the following form and tenor shall be made:

"KNOW ALL MEN BY THESE PRESENTS: That we, and, of the State of Tennessee, are held and firmly bound to the Treasurer of the Tennessee Hospital for the Insane in the penal sum of one thousand dollars, for the payment whereof we hereby jointly and severally bind ourselves.

"Witness our hands, this day of, 18...

"The condition of this obligation is as follows:

"Whereas,, of the county of, is about to be admitted as a patient into the Tennessee Hospital for the Insane, now, while remains therein, the undersigned shall constantly supply with suitable clothing, and pay all

the charges against, quarterly in advance, and pay all reasonable charges for injury to apartments and furniture, and in the event of escape, pay all reasonable charges for recapture, and if shall die therein, pay all reasonable expenses incurred for burial, and whenever removal shall be required, immediately to do so; then this obligation shall be void; otherwise it shall remain in full force.

“Witness our hands, this day of, 18...”

MEDICAL CERTIFICATE.

3. A medical certificate of the following form, signed by at least one physician of reputable standing, shall be filed with the Superintendent :

“The undersigned, being a physician in regular practice, hereby certifies that, on the day of, 18..., I personally examined, of county, State of Tennessee, and pronounce insane, and a fit subject of care and treatment in a hospital for the insane. The patient is years of age; is free from infectious disease; has been insane for; the disease is (or is not) hereditary; the supposed predisposing and exciting causes are; is not the subject of epilepsy; has (or has not) attempted to commit violence onself or others.”

This certificate shall contain all the facts known to the maker regarding the insanity of the patient, *and shall be signed and attested by a Justice of the Peace.*

REMOVAL OF PATIENTS.

SEC. 6. The Superintendent, by authority of the Resident Board of Trustees, or a majority of them, shall have power to require the removal of any patient, paying or non-paying, whenever, in their opinion, it is advisable to do so.

PATIENTS FROM COURTS OF CRIMINAL JURISDICTION.

SEC. 7. When the plea of insanity is urged on behalf of any person charged with a criminal offense, punishable by imprisonment or death, the court shall charge the jury that if, from the evidence, they believe the defendant to be insane, and that it would

endanger the peace of the community to set him at liberty, they shall so find.

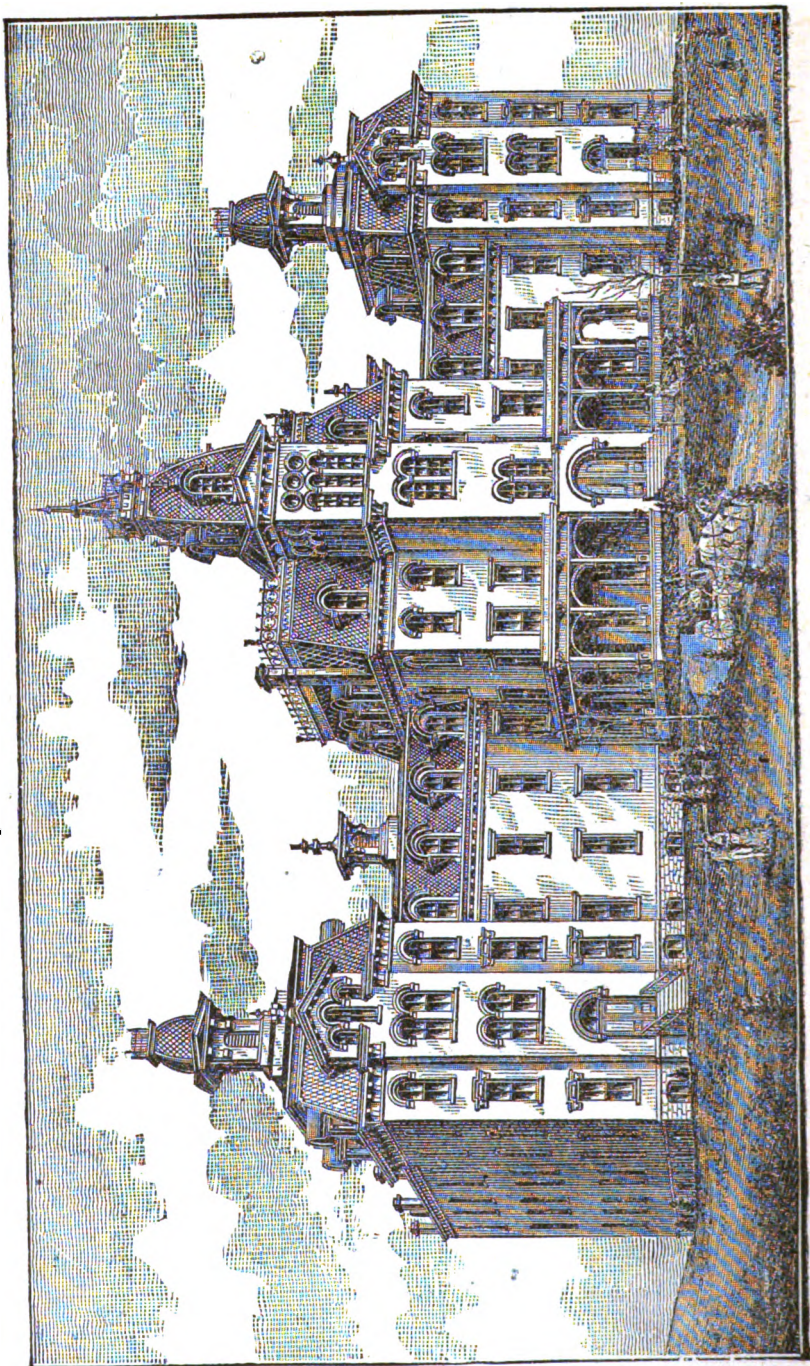
Upon such finding, the court shall direct an order to the Superintendent of the Hospital for the Insane to receive and keep the defendant as others—which order, together with the defendant, the Sheriff of the county shall deliver to the Superintendent.

When, in the opinion of the Trustees and Physician, such patient has recovered from his insanity, they shall cause him to be delivered to the Jailer of Davidson county for safe-keeping, and immediately transmit to the Clerk of the county in which the patient was arraigned, notice of the fact.

SEC. 8. That the provisions of this act shall apply to patients for admission to the hospital for the colored insane.

SEC. 9. That all laws and parts of laws in regard to the admission of patients into the Hospital for the Insane, in conflict with this act, be and the same are hereby repealed.

Passed December 14, 1871.



TWENTY-FIRST BIENNIAL REPORT
OF THE
TRUSTEES AND SUPERINTENDENT
OF THE
TENNESSEE SCHOOL FOR THE BLIND
TO THE
FORTY-FOURTH GENERAL ASSEMBLY,
OF THE
STATE OF TENNESSEE
JANUARY, 1885.

L. A. BIGELOW, SUPERINTENDENT.

NASHVILLE:
ALBERT B. TAVEL, PRINTER TO THE STATE.
1885.

BOARD OF TRUSTEES.

EDWARD H. EAST, JOHN M. LEA,
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COLORED SCHOOL.

MATRON AND TEACHER, MRS. SUSAN M. LOWE.
TEACHER OF MUSIC, MR. ISHAM TRAILOR.

REPORT OF THE TRUSTEES.

To the General Assembly of the State of Tennessee:

The Trustees of the Tennessee School for the Blind respectfully report that the affairs of the institution, with the guardianship of which they have been intrusted by the State, are in their usual satisfactory condition. The administration of the late Superintendent was so long and so successful, giving such perfect satisfaction, both to the Trustees and to the pupils, that we were not without apprehension, that, under the management of his successor, whoever he might be, such change necessarily involving, in a greater or less degree, a different mode of discipline and the introduction of somewhat new methods of instruction, there might be for a time some little interruption in the hitherto regular movement of the institution, both in its conduct as a household and in its government as a school. The difficulty did present itself, but we are glad to say that we think it has been entirely removed. The matter of complaint, originating in misapprehension, received our careful attention, and upon deliberate conference we did not conceive that the facts justified any interference on our part with the Superintendent in his management of the institution. It is not deemed necessary to set forth in this report the imagined grievances, which we considered as of rather a trivial nature, and reference to which is here made only for the reason that we wish, if further inquiry is desired, to place the General Assembly, or the Committees on Charitable Institutions, in possession of any facts within our knowledge which can even remotely affect the well-being and efficiency of the institution. We see no reason for any further trouble.

The Trustees testify with pleasure as to the zeal and fidelity with which the Superintendent has, in their opinion, tried to perform his duty, and that, too, under circumstances at times somewhat difficult and embarrassing.

Since the meeting of the last General Assembly a vacancy was created in the Board of Trustees by the death of William H. Evans, a most worthy and estimable Christian gentleman, and a faithful worker in all benevolent enterprises, in whose place we have selected as Trustee Mr. John G. Houston, of the city of Nashville, which action, we trust, will be confirmed by your honorable body.

The report of the Superintendent is herewith presented, and we specially commend it to your careful and attentive examination. The pupils have been graded into classes on a plan similar to that adopted in the Public Schools—a great improvement, we think, and which will work admirably, if parents can be induced to enter their children in the school at an early age and keep them there continuously until the course of study is finished.

The appropriations made by the last General Assembly for the support of the school were of the following sums and for the following purposes: \$2,000 annually for the support of the colored pupils; \$5,000 for fixing up colored school, furnishing chapel, for additional heating apparatus, etc., and \$7,000 in addition to the unexpended balance of \$23,000 for the use and benefit of the school. Said unexpended balance was in fact \$23,600, but the amount was of no consequence, as we have not had any necessity to spend all the money which was appropriated. Of this sum of \$39,000 thus appropriated, there have been drawn from the Treasury on warrants issued from the Comptroller's office, the sum of \$34,050, including the warrant for \$2,900, issued January 2, 1883, as may be seen by reference to the last report, and including the warrant for \$4,000 issued Dec. 19, 1884. There was of cash on hand at the time of our last report the sum of \$4,588.85, which has been increased by \$91.40, being rents for stable, etc., on the premises, amounting to \$4,680.25, which sum, added to \$34,050, makes \$38,730.25 of public money in our hands to be accounted for.

The sum of \$5,000 was used for the purposes specified in the 13th section of the Appropriation Act, and duplicate vouchers 1 to 20, inclusive, are herewith filed in a separate paper, marked Exhibit A, which accompanies and constitutes a part of this report.

The payments were to—

1883—May 19—C. S. Hahn.....	See voucher No. 1...	\$300 00
June 2—Isaac Smith.....	“ “ 2...	170 00
June 2—J. A. Bigelow.....	“ “ 3...	36 00

June 2—Alex. Gray.....	See voucher No. 4...	123 05
June 21—Weakley & Warren “ “	5...	491 00
July 14—P. Morrison.....	“ “ 6...	131 75
Aug. 23—P. L. Hedrick & Bro “ “	7...	134 28
Sept. 1—Kane & Demerich... “ “	8...	200 00
Sept. 1—Henry Cammeran.. “ “	9...	670 00
Sept. 4—Freeman & Keesee.. “ “	10...	36 30
Sept. 8—P. Morrison..... “ “	11...	200 00
Sept. 12—Kane & Demerich... “ “	12...	200 00
—Wm. Culbert..... “ “	13...	300 00
Sept. 25—Wm. Culbert..... “ “	14...	365 00
Oct. 1—C. S. Hahn..... “ “	15...	200 00
Oct. 6—Kane & Demerich... “ “	16...	528 70
1884—Mch. 1—C. S. Hahn..... “ “	17...	100 00
Mch. 19—C. S. Hahn.. “ “	18...	300 00
Mch. 28—C. H. & L. H. Lesueur “ “	19...	11 25
Apl. 28—C. S. Hahn..... “ “	20...	502 67

\$5,000 00

The sum of \$850 was paid out for painting the houses, and \$472 33 was paid to C. S. Hahn, the balance due on the new organ, vouchers for which payments are herewith filed in a separate paper, marked Exhibit B. There is a deposit to the credit of the Chairman of the Board in the American National Bank of the sum of \$85.39, and there has been issued to the Superintendent the following checks for support of the institution, namely :

1883—January 13.....	\$3,692 94
April 2.....	600 00
April 13.....	3,115 94
July 17.....	1,956 61
October 20.....	3,300 00
December 27.....	3,000 00
1884—January 1.....	800 00
March 25.....	4,439 25
June 24.....	2,646 62
September 27.....	4,475 58
December 27.....	4,295 59

Total..... \$32,322 53

RECAPITULATION.

Payments for special appropriation.....	\$ 5,000 00
Painting the entire exterior.....	850 00
Balance paid for new organ.....	472 33
Checks to Superintendent.....	32,322 53
Cash in bank.....	85 39
	<hr/>
	\$38,730 25

The balance undrawn of the last appropriation is \$4,950, and it is to be noted that the last check paid over to the Superintendent on the 27th ult., for \$4,295.59, and also the sum of \$199.56, being balance due the institution from him at last quarterly settlement, in all \$4,495.15, constitutes a fund for the estimated support of the institution for the first quarter of 1885. It is our custom to make an estimate of the expenses for the current quarter, and to place with the Superintendent a sufficiency of money to discharge the same. The undrawn balance to our credit will, we are sure, be supplemented by a sum sufficient to maintain the institution; and whatever may be the amount, we will try to manage it economically. Out of the \$32,322.53 paid over to the Superintendent, aside from said sum \$4,495.15, a larger portion of which is unexpended, and, besides the support of the Institution for two years, the Superintendent, by order of the Board, paid out \$2,515.08 for extraordinary repairs and improvements, and also \$600 for bills due when he entered on his administration.

The establishment of the colored school increases the expenses in a much greater degree than if an equal number of white pupils were added to the school—in fact, an increase of a few pupils does not increase expenses sensibly, the cost of many things, as light, heat, teaching, etc., being as great whether there be one or ten pupils. As the General Assembly wisely and justly thought that provision should be made for colored blind children, it was, of course, a necessity to have different establishments; and hence our expenses are somewhat larger than they would have been had all the pupils been of one color.

At the time of rendering our last report there was \$198.95 stand to the credit of the Chairman of the Board on the books of the First National Bank, being gifts, etc., to the school from private persons. The sum of \$20.30 was paid out during the last two

years, but the fund has been increased, and now amounts to \$248.65. This money is never mingled with any money appropriated by the State, and when used at all is for the purpose of affording amusement to the pupils.

We invite the members of the General Assembly to visit the school, and we shall take pleasure in answering any questions or giving any information which may be desired.

Respectfully submitted,

EDWARD, H. EAST, *Chm'n.*
T. ANDERSON,
GEO. W. SMITH,
C. W. NANCE,
JOHN M. LEA,
JOHN G. HOUSTON.

January 6, 1885.

REPORT OF THE SUPERINTENDENT.

To the Board of Trustees of the Tennessee School for the Blind :

GENTLEMEN :— The number of white pupils on the roll of the institution, Dec. 19, 1882, was.....		50
Since admitted		34
Discharged or discontinued.....		23
Number on roll December 19, 1884.....		—61
The number of colored pupils Dec. 19, 1882, was.....		8
Since admitted.....		4
Discharged or discontinued.....		4
Number on roll December 19, 1884.....		— 8
Whole number in both Schools December 19, 1884.....		69

Of the number (23) who have been classed as “discharged or discontinued” from the school, six are, in point of fact, pupils of the institution, and have been expected back during the present session of school, but are detained at home for various reasons. In fact, one of the greatest difficulties in the way of successful work in any department of the school, is the non-attendance and irregularity of attendance on the part of too many of the pupils. Far too large a number do not begin their school term when the institution opens; they come at different times during the session. Of course, some of these cases of absence are necessary, from illness or other family reasons; but I cannot avoid the conclusion that the greater part is owing to a lack of appreciation, on the part of parents, of the desirability of promptness and regularity.

The health of the pupils, while not perfect, has been fair. We are somewhat subject to malaria, many cases being the development of disease planted in the system before coming to the school. In February, 1884, two cases of measles occurred, and, from the peculiar nature of the malady, it was rapidly communicated to others.

Thirty-five cases occurred among the pupils. All were of normal type, and most of them light. One case became complicated with mumps and a chronic internal disorder, and was serious for a few days; but by prompt medical attention and careful nursing, the boy was soon out of danger. There have been a few cases of fever during the two years.

After the Christmas holidays of 1883, Miss Jennie Dixon, for many years connected with the institution as pupil and teacher, was taken seriously ill, and died January 18. She was sincerely beloved by the pupils, and her memory is still green among them.

In May, 1883, I graded the school into five classes. The names and studies of each grade are as follows:

Primary Class :—Reading, spelling, geography, numbers, object lessons.

Intermediate Class :—Reading, spelling, geography, arithmetic, American history.

Junior Class :—Reading, spelling, geography, arithmetic, grammar, script writing.

Sub Senior Class :—Arithmetic, grammar, physiology, algebra, ancient history, natural philosophy.

Senior Class.—Algebra, geometry, logic, natural philosophy, rhetoric, English and American literature, chemistry.

These studies have been followed as closely as possible. I have not yet found time to introduce the study of chemistry.

The Musical Department of our work continues to make satisfactory progress, under the faithful and efficient labors of Prof. J. V. Armstrong. All the pupils are given an opportunity to learn the piano, and those who manifest any talent are continued in practice on that instrument.

Through the liberality of the State, and your administration of the funds provided, we now have an excellent pipe organ, whose use will familiarize our pupils with the manipulation of any instrument of the kind, and is already proving of great value in our work. Eight of the pupils are practising on it. The new piano, and three cabinet organs which you authorized me to purchase, also add greatly to our facilities for musical instruction.

The pupils are taught vocal music, daily, in two classes, and a few are given individual lessons in singing.

Several of the older boys have daily practice in tuning pianos. I

hope we may be able to obtain models of the different parts and kinds of piano actions, so as to render those who study and practice tuning, familiar with all the different parts of the instrument.

If the school continues to increase in numbers, as it is evident it should, Mr. Armstrong will need regular assistance in the work of the Musical Department, at an early day.

The colored school has not increased in numbers during the biennial term. Those who are teaching in that department are faithful, and the results are as good as can be expected in view of the recent establishment of the school.

In the Industrial Department, eleven boys are being instructed in mattress-making, and broom-making. Sixteen of the smaller boys are taught bead-work. All the girls, at different times during the day, are taught some one or more of the following: bead-work, knitting, crocheting, hand sewing, machine sewing.

The mattress and broom shop has not sufficient room, in its present quarters, for all who might otherwise be instructed in it. It is possible that by removing certain partitions in the houses now occupied by the shop, and the shop teacher, adequate space can be obtained at small cost.

During the last few months, circulars and letters have been sent to a number of blind children, or their friends, whose names were found in the roll of the federal census of 1880. Four have been sent to the school, as a direct result of this work. About twenty dollars (\$20), has been spent during the two years, for printing, postage and stationary, for this work of soliciting pupils; and seven children have become pupils of the school, as a result. Many letters have been written which have elicited no response of any kind. If the money can be appropriated to pay the expenses of an officer of the institution, or to employ some other person, who should visit and personally investigate a number of these cases, it would probably bring many of them into the school.

The census reports 48,928 blind persons in the United States in 1880. Of this number, 5,109, or nearly 10½ per cent, are between the ages of 7 and 16, which are the limits of age for admission to this school. The State of Tennessee had, according to the same authority, 2,026 blind persons. At the same rate, then, there are in this State, 212 blind persons, of lawful age to enter this institution and receive an education. Of this number, we now have

fifty-one (51), eighteen of our present number being past 16 years of age. This would leave 161, of whom it may be said, "they ought to be in school and are not." Various causes conspire to keep many of these away; but doubtless we may count ignorance about the school and indifference to the interests of education as the chief. A few hundred dollars, judiciously expended in visiting, or sending to various parts of the State in the interest of the school, will greatly aid in removing the first of these, as well as the reluctance of parents to send their children to the school.

Again, quite a number of cases have been found where the parents, while by no means paupers, are too poor to clothe the child in a fit manner for attending a boarding-school away from home. If a law could be enacted authorizing the school to clothe such children and charge the expense to the county from whence the child comes, it would greatly aid in the work of educating these "wards of the State," whose appeal for special opportunity is twofold, arising from blindness and poverty. If the necessary expense for fare of such children could also be charged to the county it would be a good thing. In this connection, I take great pleasure in acknowledging the courtesy and liberality of Gen. J. W. Thomas, the President and General Manager of the Nashville, Chattanooga and St. Louis Railway. He has granted passes over that road for all our pupils for whom I have requested them. I have taken all care possible not to ask this favor, except where I believed it to be almost a necessity; not only to avoid burdening the benevolence of the railroad company, but to discourage unnecessary leaning upon any such aid, on the part of the pupils themselves.

During the past autumn I have had some extra work done in clearing up the grounds, and planting trees. I hope this work can be continued, and the great natural beauty of the site be thus brought into a good state of development.

You have employed the money especially appropriated by the last Legislature in necessary repairs and painting on the colored school, in having the organ built, in providing an additional boiler with pipe and radiators to increase the heating apparatus, and in improving the kitchen and dining-room facilities. A laundry and drying-room have been fitted up, a coal-house has been built, and the bath-rooms and wash-rooms have been improved; and the ex-

penses of these last have been paid out of the funds placed in my hands, as will be seen from the annexed schedule of the receipts and expenditures of the Superintendent, for the two years.

The school needs a place for the sick, properly furnished and fitted up, where those either slightly or seriously ill can be isolated and cared for, with less fatigue to those who nurse them, and greater safety and comfort to those who are ill. Such an arrangement would also lessen the probability of any contagious disease spreading among the pupils, in case any such disease should appear in the school. I think the sum of five hundred dollars (\$500.00) would be sufficient for this purpose.

Several new carpets are needed, and much of the woodwork inside the house should receive another coat of paint. The water-closets of the institution are not in a first-rate sanitary condition, and, I think, cannot be, with the present style of apparatus.

I think the sum of four thousand dollars (\$4,000.00) each quarter, with an additional appropriation of two thousand dollars (\$2,000.00) to be used in searching for pupils, fitting up sick-rooms, providing additional furniture, and other extraordinary expenses, will be an adequate provision for the needs of the school, unless the number of pupils should very greatly increase.

Besides the schedule of receipts and expenditures, a list of all who have been pupils during the two years is hereto appended.

When the liberality of Tennessee toward her School for the Blind is compared with that of some of her sister States, there is reason for self-gratulation, that the work of educating the sightless and preparing them for reasonable activity and participation in the work of the world, is so keenly appreciated in this commonwealth. It is the aim and desire of all those who are laboring in this field to so advance the true interests of the work that each succeeding General Assembly may find it a pleasure to supplement and advance the work already so progressive.

I take pleasure in thanking you, gentlemen, for the courtesy and liberality you have shown me in the somewhat trying position to which you called me.

The successor of one so long the head of the institution, and so justly beloved—even revered, it may be said, at his death—could not find all paths strewn with roses. That I have found at least as

2—Blind.

many roses as thorns, is largely due to the kindness, forbearance and courtesy of the Board of Trustees, to whom this, my first, Biennial Report is rendered.

Respectfully submitted,
L. A. BIGELOW, *Superintendent.*

SCHEDULE OF RECEIPTS AND EXPENDITURES FOR THE TWO YEARS
ENDING DECEMBER 19, 1884:

1883.		RECEIPTS.	
Jan.	13,	Chairman's check.....	\$ 3,692 94
April	2,	Chairman's check.....	600 00
April	13,	Chairman's check.....	3,115 95
July	20,	Chairman's check	1,956 61
Oct.	20,	Chairman's check.....	3,300 00
Dec.	27,	Chairman's check.....	3,000 00
1884.			
Jan.	2,	Chairman's check.....	800 00
March	24,	Chairman's check.....	994 11
March	24,	Chairman's check.....	3,445 14
June	24,	Chairman's check.....	2,646 62
Sept.	27,	Chairman's check.....	4,475 58
			<hr/> \$28,026 95

1883.	EXPENDITURES.	
	Salaries.....	6,922 50
	Musical department.....	1,773 36
	Industrial department..	310 60
	Wages and washing.....	3,336 14
	Coal.....	1,873 33
	Medicine and med. attendance..	442 41
	Provisions.....	7,681 37
	House furnishing goods.....	946 96
	Repairs and improvements.....	935 70
	Hardware and tools.....	31 53
	Gas.....	384 14
	Paper, post'ge, stat'ry & print'g	166 61
	Clothing.....	17 10
	Telephone.....	118 55

Traveling expenses.....	38 60	
Legislative expenses.....	26 50	
Expenses of convention.....	7 08	
Miscellaneous.....	299 63	
		\$25,312 31
Extraordn'ry rep'rs & improv'ts	918 08	
Paid Mrs. L. J. Sturtevant.....	100 00	
Painting Mr. Sturtevant's por't.	100 00	
Insurance.....	790 00	
Pur. piano & 3 cabinet organs.	607 00	
		2,515 08
Balance due institution.....		199 56
Total.....	\$28,026 95	\$28,026 95

LIST OF PUPILS.

NAMES.	POST OFFICE.	COUNTY.
Avery, Henrietta.....	Nashville.....	Davidson.
Bailey, Charles.....	Union City.....	Obion.
Baker, Joseph M.....	Kenton.....	Obion.
Baker, Malvina.....	Gallatin... ..	Sumner.
Ballinger, Alice.....	New Middleton.....	Smith.
Bell, Ella.....	Trenton.....	Gibson.
Bennett, William.....	Memphis.....	Shelby.
Birch, William.....	Nashville.....	Davidson.
Carey, Winona.....	Trimble.....	Dyer.
Cattlett, Etta.....	Adams.....	Robertson.
Chambers, Josie E.....	Crider.....	Carroll.
Chumley, J. Henry.....	Statesville.....	Wilson.
Clark, Annie.....	Shelbyville.....	Bedford.
Coleman, Felix.....	Winchester.....	Franklin.
Coleman, Mabra.....	Winchester.....	Franklin.
Coleman, Thomas.....	Winchester.....	Franklin.
Collins, John Franklin....	Nashville.....	Davidson.
Coplin, Julia.....	Baker's Station.....	Davidson.
Crawford, Edgar.....	Como.....	Henry.
Crews, Sarah J.....	Mansfield.....	Henry.
Crews, Robert.....	Mansfield.....	Henry.
Crews, Cora.....	Mansfield.....	Henry.
Cutler, May.....	Nashville.....	Davidson.
Daniels, Austa L.....	Rock Hill.....	Williamson.
Daniels, Fred.....	Rock Hill.....	Williamson.
Embrey, Wiley S. jr.....	Winchester....	Franklin.
Ewing, Julius.....	Nashville.....	Davidson.
Forest, Henry Nathan....	Buchanan.....	Henry.
Gardner, Jesse L.....	Newbern.....	Dyer.
Glasgow, Elija.....	Trimble Station.....	Dyer.
Grace, Sarah Daisy.....	Dover.....	Stewart.
Green, Rosa.....	Nashville.....	Davidson.
Gregory, Whre.....	Chapel Hill.....	Marshall.
Hall, F. Sloan.....	Nashville.....	Davidson.
Hanks, James Franklin...	Morristown.....	Hamblen.
Hardin, Lizzie.....	Gallatin.....	Sumner.
Hill, Eleanor... ..	Nashville.....	Davidson.
Hillis, T. Seaborn.....	Greenfield... ..	Weakley.
Hobbs, Willie.....	Nashville.....	Davidson.
Huffaker, Lizzie.....	Gap Creek.....	Knox.

LIST OF PUPILS—*Continued.*

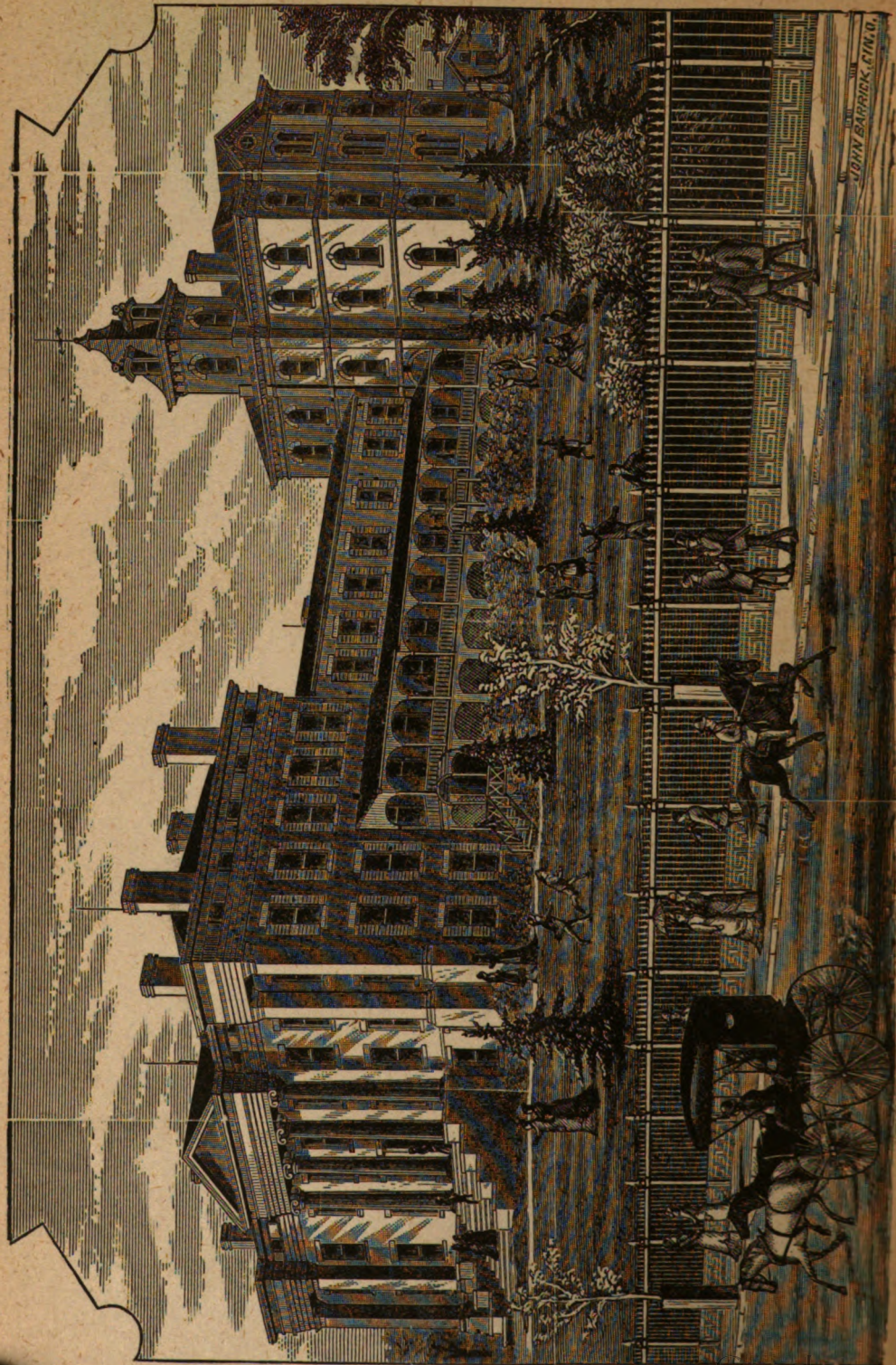
NAMES.	POST OFFICE.	COUNTY.
Ivy, William.....	Povo.....	Henry.
Johnson, George.....	Brick Mills.....	Blount.
Jones, Willie.....	Nashville.....	Davidson.
Jordan, John.....	Mill Brook.....	Washington.
Killebrew, Susie.....	Palmersville.....	Weakley.
Kimbrow, Cora.....	Overall.....	Rutherford.
Kyle, Onie F.....	Buena Vista.....	Carroll.
Leftwich, Gertrude.....	Cuba.....	Shelby.
Linton, Sam.....	Ooltewah.....	James.
Lowery, Josie.....	Cottage Grove.....	Henry.
Mason, Annie Rees.....	Ringgold.....	Montgomery.
McDonel, Ida.....	Sharon.....	Weakley.
McCauley, Loulie Ellen.....	Hustburg.....	Humphreys.
McCampbell, Walter.....	Knoxville.....	Knox.
McMurray, Mary Othella.....	Cuba.....	Shelby.
Patrick, Serena.....	Murfreesboro.....	Rutherford.
Payn, Colleen.....	Huntingdon.....	Carroll.
Petty, John.....	Offutt.....	Anderson.
Piper, Ella.....	Riddleton.....	Smith.
Porter, Katie.....	Loudon.....	Loudon.
Post, Nellie.....	Ooltewah.....	James.
Queener, George.....	Murfreesboro.....	Rutherford.
Randles, Margaret M.....	Knoxville.....	Knox.
Randles, Wesley.....	Knoxville.....	Knox.
Russell, Laura.....	Adair's Creek.....	Knox.
Rice, Robert Lee.....	Lexington.....	Henderson.
Roberts, John.....	Dresden.....	Weakley.
Scott, Walter.....	Nashville.....	Davidson.
Simmons, Spencer.....	Como.....	Henry.
Sims, Lena.....	Shelbyville.....	Bedford.
Standfield, Andrew.....	Saltillo.....	Hardin.
Strickland, Walter.....	Heiskell's Station.....	Knox.
Stroud, Loula.....	Winchester.....	Franklin.
Susong, James.....	Concord.....	Knox.
Thomas, Laura.....	Nashville.....	Davidson.
Thomas, Lou Etta.....	Trimble.....	Dyer.
Traylor, Isham.....	Laverne.....	Rutherford.
Turner, Robert M.....	Hustburg.....	Humphreys.
Wade, Emma.....	Murfreesboro.....	Rutherford.
Wamble, Eddie C.....	Kenton.....	Obion.

LIST OF PUPILS—*Continued.*

NAME.	POST OFFICE.	COUNTY.
Weaver, Charles.....	Memphis.....	Shelby.
Webb, Byrd.....	Dukedom.....	Weakley.
Wilson, Buena Vista.....	Cosby.....	Cocke.
Wynn, Ida.....	Colesburg.....	Dickson.

LIST OF COLORED PUPILS.

NAME.	POST OFFICE.	COUNTY.
Bradford, Sarah.....	Brownsville.....	Haywood.
Current, Willie.....	Nashville.....	Davidson.
Evans, George.....	Nashville.....	Davidson.
Guin, Charles.....	Waverly.....	Humphreys.
Hall, Mary.....	Nashville.....	Davidson.
Harris, Chastine.....	Gallatin.....	Sumner.
Parch, Grant.....	Nashville.....	Davidson.
Rand, Fred.....	Gallatin.....	Sumner.
Rolen, John.....	Nashville.....	Davidson.
Westfield, Emma.....	Nashville.....	Davidson.
Hawkins, Lewis.....	Greenville.....	Greene.
Thompson, Thomas.....	Nashville.....	Davidson.



NINETEENTH BIENNIAL REPORT
OF THE
BOARD OF TRUSTEES
OF THE
TENNESSEE
School for the Deaf & Dumb
LOCATED AT KNOXVILLE,
TO THE
GOVERNOR AND GENERAL ASSEMBLY OF TENNESSEE,
DECEMBER 20, 1884.

NASHVILLE:
ALBERT B. TAVEL, PRINTER TO THE STATE.
1885.

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W. O. BRANUM,	MRS. MARY H. IJAMS.

ATTENDING PHYSICIAN :

JOHN M. BOYD, M. D.

MATRON :

MISS SALLIE L. JACKSON.

STEWARD :

E. C. JONES.

HOUSEKEEPER :

MRS. ANNA JONES.

To His Excellency Hon. WM. B. BATE, Governor of the State of Tennessee:

I have the honor of transmitting herewith the Nineteenth Biennial Report of the Board of Trustees of the Tennessee School for the Deaf and Dumb, to the Governor and General Assembly of the State.

Very respectfully,

THOMAS L. MOSES,

Secretary of the Board.

REPORT OF THE PRESIDENT.

To the Governor and General Assembly of the State of Tennessee :

The Trustees of the Tennessee School for the Deaf and Dumb herewith present the Reports of the officers of the institution as constituting their own Nineteenth Biennial Report.

The statements they contain so fully set forth the history of the school for the last two years, and so clearly show its present condition, that but little else is needed than to invite your thoughtful consideration of our wants for the future.

I have been directed by the Board of Trustees, to ask of the General Assembly the following appropriations, to-wit :

1. The sum of \$45,000, payable in quarterly installments, for the support of the white department of the school for the coming two years.

2. The sum of \$3,000, payable June 1, 1885, for needed improvements and repairs of the buildings of the white department.

3. The sum of \$4,000, payable June, 1, 1885, for heating, with hot water apparatus, the halls, sitting-rooms, and especially the bed-rooms, of the white department.

4. The sum of \$6,000, payable in quarterly installments, for the support of the colored department for the next two years.

5. The sum of \$5,500, payable September 1, 1885, for the purchase of land and buildings for the colored department.

6. The sum of \$1,000, payable in quarterly installments, for improvement and repair of buildings for the colored department.

With this enumeration of our wants, offered with a freedom which, it is believed, you both expect and desire, and with an expression of trust that, under Divine guidance, the blessed influence of the school may be still more widely extended, our report is

Respectfully submitted,

JNO. L. MOSES,

President of the Board of Trustees.

KNOXVILLE, TENN., December 20, 1884.

PHYSICIAN'S REPORT.

Honorable President and Members of the Board of Trustees:

GENTLEMEN: With great pleasure I have again to report two years of general good health in the school.

Perhaps never, in the happy history of the institution, have the pupils had such immunity from serious illness. No instance of death has occurred.

A few cases of malarial fever have happened among the children from the low counties. Most of the sickness has been of a catarrhal and rheumatic character.

Improvements in the bath department for the girls, has lessened exposure and its consequences to them.

I would urge that a similar comfortable arrangement for the boys be made as soon as practicable. The halls, and especially the sleeping apartments, for all the pupils are too cold.

From this cause results most of the preventible sickness. It is dangerous to trust fires in the sleeping rooms of the mutes; and as medical officer of the institution, I cannot too fully insist upon the importance of a better and safer means of warming them than is now at command.

Respectfully,

JNO. M. BOYD, M. D.,

Physician of Tennessee School for the Deaf and Dumb.

REPORT OF THE PRINCIPAL.

To the Board of Trustees of the Tennessee School for the Deaf and Dumb:

GENTLEMEN: The biennial term now closing has been one of quiet, earnest work on the part of the teachers and officers of this institution, striving to promote the welfare of the deaf and dumb under their charge.

We have great reason to be thankful for the continuation of the divine favor, for the constant guidance and protection of the providential hand that "hitherto hath helped us."

HEALTH OF THE PUPILS.

The general good health of our pupils for the past two years, has been remarkable. There have been very few cases of serious sickness, and no deaths in the institution during that time.

Parents often manifest a very natural anxiety in regard to the health of their children committed to our care; and concerning their treatment in case of sickness.

I do not hesitate to assure all that, on account of the healthfulness of our climate, the thorough sanitary arrangements of our grounds and buildings, and the freedom from exposure in bad weather, their children are much less liable to sickness here than at most homes; and should they be taken sick that they will be as well or better cared for here than at home.

Our physician, and those who have charge of sick pupils, render them every needed attention promptly.

Their skill and familiarity from long experience with deaf mute children and the diseases to which they are most liable, make them peculiarly adapted to the care of these children, and efficient in the measures employed for their relief.

ATTENDANCE.

The number of pupils admitted to the white department of the institution during the two years, is one hundred and fifty-one (151). The average attendance has been something over one hundred.

I have attempted, by investigation of the United States census returns for 1880, to ascertain the exact number of deaf mutes in the State of proper school age, and to put myself in communication with their parents.

The returns are incomplete in that no postoffice is given. In most instances, merely the civil district in which parties reside is stated; hence parents reported as having deaf mute children cannot be reached by mail with any certainty. The statements made are often incorrect, children being frequently enumerated as deaf mutes who ought not to be so classed.

In other cases, children that we know about, are entirely omitted from the enumeration. But there is enough of accuracy in this and other sources of information at hand, to show that many deaf mutes in Tennessee are growing up in ignorance who are eligible to, and ought to be receiving the benefits of our institution.

In many cases parents and friends are not aware that there is such an institution, or knowing of its existence, are at a loss how to proceed to avail themselves of its privileges.

Through the kind interest of Governor Bate, and Messrs. Northrop and Buntin, members of the General Assembly, I have been put in communication with some bright children who are now pupils of the school.

Members of the Legislature can render their constituents and the school a service by putting the officers in communication with any deaf and dumb children in their respective districts.

The provision of the Code of Tennessee, requiring tax assessors to enumerate, and county court clerks to report to the School for the Blind, all the blind children in their counties, and to report to this school all deaf mutes, is a dead letter, so far as this institution is concerned, no reports of that kind being received.

If the blanks for the assessment of taxes could be printed with reference to this requirement, space being assigned for the enumeration, and the attention of assessors called to it through the clerk, considerable information might be gathered in regard to deaf mutes of whom we have no knowledge.

There are many localities, inaccessible to the ordinary lines of travel, that should be visited, and heretofore neglected pupils reached. This would require special journeys in addition to regular trips to bring in pupils at the opening of the session, and would

involve considerable expense. This fact has, hitherto, restricted this work. I trust that we shall hereafter be better able to pursue it.

METHODS OF INSTRUCTION.

Our oral class has been continued for the past two years with gratifying success.

The Manual or Sign method is employed in five classes. Signs form the natural language of the deaf, and are the medium through which their minds may be the most easily reached and awakened.

The sign language has accomplished wonderful results in the education of the deaf and dumb of all grades of intelligence. It forms an easy and intelligible means of communication among the deaf, and is to my mind, an invaluable vehicle of thought between teacher and pupil.

In the case of some children, it seems almost impossible to awaken thought in any other way. Instances have fallen under my observation of children coming to us hopelessly dull and stupid, to all appearances, who, in a short time, began to manifest an interest in the conversation going on around them, and to try to make themselves understood and to understand the signs of their play-mates.

The spark of intellect thus kindled, the teacher of tact fans and feeds until a flame of intelligence lights the eye once dull and expressionless, changing the whole appearance of the child so that friends and neighbors aver that almost a miracle has been wrought. Still the exclusive use of oral teaching is earnestly and ably advocated by many intelligent and conscientious instructors.

The outcome of theory and argument, thoroughly believed and faithfully practiced, will be watched with interest; and the practical results of the different methods will determine their comparative merits and extent of usefulness.

The subject is receiving much attention in this country at present. The extent to which it may be profitably employed; the benefits of the oral system as measured by results in comparison with the manual or sign method; are questions in which all engaged in the instruction of the deaf are interested, and are making the subject of careful investigation.

It is our aim to keep abreast of the times in all methods, and to give the children entrusted to our care, the benefit of that which is the most practical and best in each individual case.

WANTS.

Under this head special appropriation will be required for several items. Among the needs which have been called to the attention of the Board, by the members, and discussed by you, I would mention the replacement of the old porches now occupying the east and west sides of our building. Besides being unsightly and out of harmony, especially with our chapel and school-building, they are a continual source of expense for repairs; and, except for extra props and braces by which it is upheld, the one on the boys' side of the house would be dangerous.

But I desire particularly to call your attention to some needs which have not, as yet, so far as I know, been under the consideration of the Board: First, I would mention a new bath-room for the boys, as almost an absolute necessity.

It is not essential that I should here enumerate all the drawbacks and deficiencies of the room now used for that purpose. Suffice it to say that it is not suitable for a bath-room, as an inspection of the premises will readily show.

It is impossible to have this important part of the management of the school attended to properly with the present arrangement. The girls' bath-room is a great convenience, and is a credit to the institution. They need also a drying-room for clothes; our proximity to the railroads and rolling mill, and the increasing use of coal on every side, make it very difficult to have clothes properly dried in the yard.

Such a room would lighten the cares of our house-keeper materially, and contribute toward economy in clothing and bedding.

We need a play-ground for the boys, and a room for them to exercise in when the weather is so bad that they cannot take out-door exercise.

It is not possible, nor do I deem it desirable, to restrain entirely that spirit in children which manifests itself in rough play and boisterousness at inappropriate times and places, if it has no other outlet; hence it is desirable as contributing to the good government of such an institution as ours, and to the health and happiness of its inmates, that they should be afforded opportunities for the reasonable indulgence of the natural disposition to romp and play.

The only play-ground that the boys can call their own, in the season for out-door sports, is the brick pavement between the laun-

dry and the main building, except when a drought (I had almost said, sent by a kind consideration for the boys) kills the grass on the lawns.

I think also that we ought to have a library. The nice room on the first floor of the chapel building is admirably adapted to that purpose. But one institution in the United States reports so small a library as ours. We have practically none.

I would suggest that the Board authorize the annual expenditure for the present of a limited sum ; and thus enable us to begin the collection of a library.

Other wants of the institution have been considered by your body, and will doubtless be made the subject of action by the Board.

EXPENDITURES AND APPROPRIATIONS.

The accompanying reports of the Executive Committee show in detail the amounts expended for each quarter. With the most rigid economy in every department, the expenditures have necessarily exceeded the appropriation by the last General Assembly ; the sum appropriated being insufficient for the support of the school for two years.

Your officers have endeavored by careful personal oversight of the property of the institution, and of all purchases and disbursements, to keep as nearly within the appropriation as possible, refraining from making expenditures for things really needed in many cases. As indicating that the money has been carefully expended, and that our institution compares favorably in point of economy with other similar institutions, I desire to call attention to the statistics for last year of a number of the principal schools of the country, embracing most of the State institutions for the Deaf and Dumb, and being such as I have been able to obtain in full.

The list contains twenty-eight institutions besides our own.

These twenty-eight schools had four thousand six hundred and forty-eight, [4,648] pupils present on December 1st, 1883, which is assumed to be an average attendance for the year. Their expenditures for all purposes were \$1,301,729, or an average of two hundred and eighty dollars per capita ; whereas, the expenditure per capita for our institution for the same period was twenty-six per cent. less, or about two hundred and seven [207] dollars.

Excluding extraordinary expenses, such as new buildings, im-

provements, etc., we find, of course, that the larger institutions (some of them containing from two hundred to five hundred pupils) are able to reduce below the average the per capita expenditure for ordinary support, which embraces cost of living, salaries, etc., but in no case do we find the cost of ordinary support so small as with us—the average for this item being thirty-three per cent. greater in the other institutions, taken as a whole.

Excluding all schools having an attendance of more than one hundred and fifty pupils, at the date mentioned, we have left fifteen institutions which form a fairer basis of comparison with our school than all of them taken together.

We find that the average cost for those schools having less than one hundred and fifty pupils, was sixty-two (62) per cent. greater per pupil than at this institution for the same time.

A sister State, having about three times our population, expended, last year, for the ordinary support of the deaf mute children in her educational institutions, sixteen times as much money as Tennessee contributed through our school.

Thus I might multiply illustrations to show that your expenditures, for the past two years, have been neither extravagant nor unreasonable; but on the other hand that they have been economical and comparatively light—not only light as compared with other institutions, but also less than our institution has ever before expended in the support of an equal number of pupil.

The appropriations for thirteen years, from 1870 to 1882, inclusive, averaged five thousand dollars per annum more than for the past two years; and the appropriations received from 1877 to 1882, inclusive, exceeded the amount for the term now closing by more than four thousand dollars per annum, though the number of pupils supported during the last two years has been considerably greater than for any like period since 1876.

The day for argument, as to the relations sustained by the deaf-mute children of a commonwealth toward the State Government, has passed away.

Everywhere enlightened and philanthropic legislators recognize the fact that these afflicted ones are the wards of the State, and that

it is the part of true public policy, wise economy, humanity and duty, to provide liberally for their education. I believe that, it is only necessary for you to point out to the General Assembly our reasonable needs, and that they will cheerfully make proper provision for our school for the ensuing two years.

Having tried the experiment of maintaining the school for the past two years on twenty thousand dollars per annum, and having found it is impossible to do so properly on that sum, I would recommend that the Board ask for twenty-two thousand five hundred dollars (\$22,500) per annum for the current expenses of the institution, making forty-five thousand dollars (\$45,000) for support of the school for two years. This is, in my judgment, as small a sum as will properly provide for the ordinary expenses of the institution for that time.

Believing that there exists no nobler channel for the exercise of the beneficence of the State than the mental and moral elevation of this class of her children, who are helpless without her aid, we appeal with confidence to the liberality and sound judgment of the members of the General Assembly for the future adequate maintenance of our school.

Surely money and labor are well spent which make intelligent, respected, self-respecting and self-supporting citizens of those whose lives would, otherwise, be shrouded in mental and moral darkness—a burden to themselves and to the community.

We point with pride to the fostering care of the State, and to what has been accomplished in the past. Relying upon her continued generosity, and inviting with confidence an inspection of the work now being done, we look hopefully to the future for an enlarged success in our work.

We are under obligations for favors and courtesies extended, and desire hereby to tender our thanks to State Treasurer Thomas, and Mr. House, of the Treasurer's office; to Comptroller Pickard, and Messrs. Allen and Campbell, of the Comptroller's office; to Col. Thomas and Maj. Wrenne, of the Nashville, Chattanooga & St. Louis Railway; to Judge Gothard and Mr. Moffett, of the East Tennessee, Virginia & Georgia Railroad; to Capt. Peeples of the

Union Depot at Chattanooga ; and to conductors and employes of both of the above mentioned railroads, many of whom have kindly rendered us assistance in traveling which was highly appreciated.

We also make grateful mention of favors conferred by the Press of the State, the Steubenville, Ohio, Gazette, and the different Institution papers.

Respectfully submitted,

THOMAS L. MOSES, *Principal.*

TREASURER'S REPORT.

1883.

DEBIT.

Jan. 1,	To Balance on hand.....	\$ 904 08
Jan. 25,	To Appropriation account of 1882.....	4,400 00
Mar. 13,	To Shoe-shop, per E. C. Jones.....	90 55
Apr. 2,	To Balance of former appropriation.....	4,400 00
Apr. 2,	To Quarterly appropriation account of 1883-4..	5,000 00
July. 6,	To Cash from pupils.....	176 10
July. 7,	To Cash from shoe-shop, per Jones.....	15 15
July. 7,	To Cash from shoe-shop, colored department...	50 00
July. 7,	To Cash from transportation, colored dep'm't..	29 00
July. 7,	To Quarterly appropriation.....	5,000 00
Sept. 22,	To Quarterly appropriation.....	5,000 00
Oct. 2,	To Tuition.....	100 00

\$25,164 88

1883.

CREDIT.

Jan. 9,	By Telegram.....	\$ 1 00
Jan. 25,	By Cash paid Executive Committee.....	2,000 00
Mar. 2,	By Cash paid Executive Committee.....	2,000 00
Mar. 3,	By Expense to Nashville.....	15 00
Apr. 2,	By Cash paid Executive Committee.....	2,000 00
Apr. 5,	By Cash paid Executive Committee.....	500 00
May 3,	By Cash paid Executive Committee.....	2,000 00
June 1,	By Cash paid Executive Committee.....	2,500 00
July 3,	By Cash paid Executive Committee.....	1,000 00
Aug. 1,	By Cash paid Executive Committee.....	1,000 00
Sept. 7,	By Cash paid Executive Committee.....	2,000 00
Oct. 4,	By Cash paid Executive Committee.....	1,500 00
Nov. 1,	By Cash paid Executive Committee.....	1,500 00
Dec. 1,	By Cash paid Executive Committee.....	2,000 00
Jan. 2,	By Cash paid Executive Committee.....	2,500 00

\$22,516 00

Balance..... 2,648 88

\$25,164 88

2—Dumb.

1884.

DEBIT.

Jan. 1, To Balance	\$ 2,648 88
Jan. 30, To Cash from shoe-shop.....	42 70
Jan. 30, To Cash from sale of iron bedsteads.....	22 50
Apr. 7, To Cash from tuition.....	90 00
Apr. 7, To Cash from shoe-shop and sale of cow.....	64 75
Apr. 7, To Appropriation for quarter ending Mar. 19..	5,000 00
Apr. 7, To Appropriation for quarter ending June 19..	5,000 00
Apr. 7, To Appropriation for quarter ending Sept. 19..	5,000 00
Apr. 7, To Appropriation for quarter ending Dec. 19..	5,000 00
	<hr/>
	\$22,868 83

1884.

CREDIT.

Feb. 1, By Cash paid Executive Committee.....	\$ 2,000 00
Mar. 3, By Cash paid Executive Committee	2,000 00
Apr. 3, By Cash paid Executive Committee.....	2,000 00
May. 2, By Cash paid Executive Committee.....	2,000 00
June 5, By Cash paid Executive Committee.....	2,000 00
July 1, By Cash paid Executive Committee.....	1,500 00
Aug. 2, By Cash paid Executive Committee.....	1,000 00
Sept. 24, By Cash paid Executive Committee	1,000 00
Oct. 2, By Cash paid Executive Committee	2,000 00
Nov. 3, By Cash paid Executive Committee	2,000 00
Dec. 1, By Cash paid Executive Committee (Nov. bills)	2,000 00
	<hr/>
	\$19,500 00
By Balance December 1, 1884.....	3,368 83
	<hr/>
	\$22,868 83

Respectfully submitted,

S. B. BOYD, *Treasurer.*

REPORT OF THE EXECUTIVE COMMITTEE.

The following statement shows the receipts and disbursements of this committee from December 31, 1882, the date of our last biennial report, to December 31, 1884, the last month—December, 1884—being estimated, as this report is made up before the close of the month.

Vouchers for all moneys paid out have been examined and approved, and are on file subject to inspection :

QUARTER ENDING MARCH 31, 1883.

1883.	DEBIT.	
Jan. 1, To Balance on hand.....	\$	107 67
Jan. 25, To Cash of Treasurer.....		2,000 00
Mar. 2, To Cash of Treasurer.....		2,000 00
Apr. 2, To Cash of Treasurer.....		2,000 00
Apr. 5, To Cash of Treasurer.....		500 00
		\$ 6,607 67
	CREDIT.	
Mar. 31, By Buildings and grounds.....	\$	567 72
Mar. 31, By House-furnishing.....		70 03
Mar. 31, By Shoe-shop account.....		339 87
Mar. 31, By Drugs and medicines.....		70 94
Mar. 31, By Medical attendance.....		119 00
Mar. 31, By Salaries and wages		2,372 00
Mar. 31, By Stationery, books and postage.....		110 43
Mar. 31, By Transportation		169 10
Mar. 31, By Hardware and tinware.....		202 89
Mar. 31, By Supplies.....		1,575 99
Mar. 31, By Clothing and merchandise.....		147 10
Mar. 31, By Fuel and lights.....		311 02
Mar. 31, By Livery.....		34 00
Mar. 31, By Incidentals		14 00
Mar. 31, By Insurance.....		31 25
		\$ 6,135 44
Mar. 31, By Balance to next quarter.....		472 23
		\$ 6,607 67

QUARTER ENDING JUNE 30, 1883.

DEBIT.

Apr. 1, To Balance.....	\$ 472 23
May 3, To Cash of Treasurer.....	2,000 00
June 1, To Cash of Treasurer.....	2,500 00
July 3, To Cash of Treasurer.....	1,000 00
	\$5,972 23

CREDIT.

June 30, By Clothing.....	\$ 134 29
June 30, By Drugs.....	33 79
June 30, By Medical attendance.....	17 00
June 30, By House-furnishing.....	63 38
June 30, By Gas and fuel.....	36 45
June 30, By Shoe-shop.....	265 22
June 30, By Incidentals.....	24 25
June 30, By Hardware.....	15 95
June 30, By Tinware and cooking range.....	103 70
June 30, By Repairs.....	99 33
June 30, By Postage.....	16 10
June 30, By Books and stationery.....	48 13
June 30, By Freight and transportation.....	553 50
June 30, By Salaries and wages.....	2,349 35
June 30, By Insurance.....	68 75
June 30, By Supplies.....	1,110 51
June 30, By Grounds and buildings.....	266 55
	\$5,206 25
June 30, By Balance to next quarter.....	765 98
	\$ 5,972 23

QUARTER ENDING SEPTEMBER 30, 1883.

DEBIT.

July 1, To Balance	\$ 765 98
Aug. 1, To Cash of Treasurer.....	1,000 00
Sept. 7, To Cash of Treasurer.....	2,000 00
Oct. 4, To Cash of Treasurer	1,500 00
	<hr/>
	\$ 5,265 98

CREDIT.

Sept. 30, By Supplies.....	\$ 436 44
Sept. 30, By Labor.....	154 25
Sept. 30, By House-furnishing.....	155 00
Sept. 30, By Medical attendance.....	5 00
Sept. 30, By Drugs.....	18 38
Sept. 30, By Salaries and wages	2,260 00
Sept. 30, By Fuel and gas.....	26 90
Sept. 30, By Repairs and improvements.....	138 96
Sept. 30, By Clothing.....	30 92
Sept. 30, By Copying census.....	20 00
Sept. 30, By Books and stationery	91 60
Sept. 30, By Transportation and drayage.....	386 15
Sept. 30, By Insurance.....	225 00
Sept. 30, By Shoe-shop account.....	71 06
	<hr/>
	\$ 4,119 56
Sept. 30, By Balance to next quarter.....	1,246 42
	<hr/>
	\$ 5,265 98

QUARTER ENDING DECEMBER 31, 1883.

1883.		DEBIT.	
Oct. 1,	To Balance.....	\$1,246	42
Nov. 1,	To Cash of Treasurer.....	1,500	00
Dec. 1,	To Cash of Treasurer.....	2,000	00
1884.			
Jan. 2,	To Cash of Treasurer.....	2,500	00
			<hr/>
			\$7,246 42
		CREDIT.	
Dec. 31,	By Supplies.....	\$1,376	05
Dec. 31,	By Fuel and lights.....	253	55
Dec. 31,	By Books, stationery etc.,.....	287	01
Dec. 31,	By Dry goods and clothing.....	352	76
Dec. 31,	By Shoe-shop account.....	252	11
Dec. 31,	By Drugs and medical attention.....	89	12
Dec. 31,	By Miscellaneous articles.....	14	12
Dec. 31,	By Improvements and repairs.....	202	86
Dec. 31,	By Traveling and freight.....	116	70
Dec. 31,	By Labor.....	153	70
Dec. 31,	By Salaries and wages.....	2,423	15
Dec. 31,	By House-furnishing.....	179	09
Dec. 31,	Insurance.....	31	25
			<hr/>
			\$5,722 47
By Balance to next quarter.....		1,523	95
			<hr/>
			\$7,246 42

QUARTER ENDING MARCH 31, 1884.

1884.

DEBIT.

Jan. 1, To Balance.....	\$ 1,523 95
Feb. 1, To Cash of Treasurer	2,000 00
Mar. 3, To Cash of Treasurer.....	2,000 00
Apr. 3, To Cash of Treasurer	2,000 00
	<hr/>
	\$7,523 95

CREDIT.

Mar. 31, By Shoe-shop account.....	\$ 288 06
Mar. 31, By Supplies.....	1,667 17
Mar. 31, By Books, stationery, etc.,.....	135 21
Mar. 31, By House-furnishing.....	141 80
Mar. 31, By Fuel and lights.....	296 91
Mar. 31, By Drugs and medicines.....	69 80
Mar. 31, By Freight and traveling.....	41 40
Mar. 31, By Miscellaneous.....	44 95
Mar. 31, By Salaries and wages	2,298 00
Mar. 31, By Improvements and repairs.....	306 60
Mar. 31, By Dry goods and clothing.....	221 49
Mar. 31, By Insurance	68 75
Mar. 31, By Grounds.....	330 35
Mar. 31, By Medical attendance.....	48 00
	<hr/>
	\$5,958 49
Balance to next quarter.....	1,565 46
	<hr/>
	\$7,523 95

QUARTER ENDING JUNE 30, 1884.

1884.

DEBIT.

Apr. 1, To Balance.....	\$ 1,565 46
May 2, To Cash of Treasurer.....	2,000 00
June 5, To Cash of Treasurer.....	2,000 00
July 1, To Cash of Treasurer.....	1,500 00
	<hr/>
	\$7,065 46

CREDIT.

June 30, By Supplies.....	\$ 1,085 04
June 30, By Salaries and wages.....	2,362 00
June 30, By Dry goods and clothing.....	326 28
June 30, By Repairs.....	315 99
June 30, By Shoe-shop.....	213 74
June 30, By Fuel and lights.....	54 50
June 30, By Printing office account.....	50 15
June 30, By Grounds.....	290 13
June 30, By Drugs.....	30 94
June 30, By Medical attention.....	91 00
June 30, By House-furnishing.....	45
June 30, By Transportation and drayage.....	380 90
June 30, By Insurance.....	31 25
June 30, By Books and stationery.....	54 75
	<hr/>
	\$5,287 12
By Balance to next quarter.....	1,778 34
	<hr/>
	\$7,065 46

QUARTER ENDING SEPTEMBER 30, 1884.

1884.

DEBIT.

July 1, To Balance.....	\$ 1,778 34
Aug. 2, To Cash of Treasurer...	1,000 00
Sept. 24, To Cash of Treasurer.....	1,000 00
Oct. 2, To Cash of Treasurer.....	2,000 00
	<hr/>
	\$ 5,778 34

CREDIT.

Sept. 30, By Printing office account	\$ 2 00
Sept. 30, By Transportation.....	312 20
Sept. 30, By Insurance	256 25
Sept. 30, By Fuel and lights.....	107 75
Sept. 30, By Salaries and wages.....	2,218 10
Sept. 30, By Clothing	28 51
Sept. 30, By Medical attendance.....	16 00
Sept. 30, By Books and stationery.....	66 69
Sept. 30, By House-furnishing.....	135 30
Sept. 30, By Shoe-shop account.....	63 10
Sept. 30, By Account of grounds.....	186 25
Sept. 30, By Repairs.....	604 66
Sept. 30, By Drugs.....	26 73
Sept. 30, By Supplies.....	426 96
	<hr/>
	\$4,450 50
By Balance to next quarter.....	1,327 84
	<hr/>
	\$5,778 34

QUARTER ENDING DECEMBER 31, 1884.

DEBIT.

Oct. 1, To Balance.....	\$1,327 84
Nov. 3, To Cash of Treasurer.....	2,000 00
Dec. 1, To Cash of Treasurer.....	2,000 00
	<hr/>
	\$5,327 84
To estimated deficiency for this quarter.....	701 39
	<hr/>
	\$6,029 23

CREDIT.

Nov. 30, By Supplies for October and November.....	\$ 865 60
Nov. 30, By Books and stationery	75 92
Nov. 30, By House-furnishing.....	42 15
Nov. 30, By Clothing and dry goods.....	164 41
Nov. 30, By Labor and grounds.....	134 62
Nov. 30, By Traveling.....	111 90
Nov. 30, By Repairs.....	209 71
Nov. 30, By Salaries and wages.....	1,841 50
Nov. 30, By Shoe-shop account.....	165 82
Nov. 30, By Fuel and lights.....	129 20
Nov. 30, By Drugs and medicines.....	67 21
Nov. 30, By Pasturage	10 00
Nov. 30, By Printing office account.....	20 64
Nov. 30, By Filling cisterns	27 50
Nov. 30, By Hand dray.....	12 00
	<hr/>
	\$3,878 18
Dec. 31, By Expenses for December estimated same as December, 1883... ..	2,151 05
	<hr/>
	\$6,029 23

In order that this report may be forwarded before the meeting of the General Assembly, we have been obliged to estimate the expenses of the last month of the term. In doing so, we have assumed that they will be the same as for the corresponding month of last year.

Respectfully submitted,

JNO. S. VAN GILDER,

S. B. BOYD.

WM. K. ECKLE,

Executive Committee.

KNOXVILLE, TENN., December —, 1884.

**LIST OF PUPILS ENROLLED SINCE LAST REPORT,
DECEMBER 30, 1882.**

NAME.	COUNTY.
Mollie E. Mynatt	Knox.
Lula O. Carter	Davidson.
Bettie Yost.....	Sullivan.
Mary J. Hale.....	Roane.
Carrie Watson.....	Knox.
Sallie Wilson.....	Robertson.
Lillie Shaw	Gibson.
Katie Hulse.....	Hamilton.
Esther H. Elliott.....	Franklin.
Mollie Cooper.. ..	Lauderdale.
Lizzie Haynes.....	Sumner.
Lethea Johnson	DeKalb.
Linnie Batt.....	Bradley.
Annie Rosson.....	Robertson.
Lula Kidd	Knox.
Summer Pebley	Anderson.
Edna B. Locke	Tipton.
Willie B. Waddy.....	Williamson.
Mamie Evans.....	Hamblen.
Alice Hudson.....	Davidson.
Maggie Finley.....	Marshall.
Jennie Carmack	Henry.
Alice Gibson.....	Mauzy.
Ella Wilson.....	Robertson.
Mattie Fleming.....	Madison.
Mary Winkle.....	Greene.
Mary E. Davis	Greene.
Lucy Lacy.....	Lauderdale.
Fannie Byram	Davidson.
Addie Thomas.....	Knox.
Cora Acuff	Grainger.
Lizzie Ferguson.....	Lake.
Mollie Hembree.....	Scott.

LIST OF PUPILS ENROLLED SINCE LAST REPORT,
DECEMBER 30, 1882—*Continued.*

NAME.	COUNTY.
Sarah L. Rail.....	Williamson.
Rebecca C. Mynatt.....	Knox.
Martha Campbell	Jefferson.
Lottie Hunter.....	Lauderdale.
Mary Eggstein.....	Davidson.
Laura Bunch	Davidson.
Maggie Yost.....	Sullivan.
Minnie Ottinger.....	Cocke.
Fannie Sobel.....	Davidson.
Mary Duncan.....	Anderson.
Cassie Lacy.....	Lauderdale.
Jennie Fletcher.....	Bradley.
Gertrude Wood.....	Knox.
Sallie Crumpley.....	Knox.
Mary Hooten.....	Warren.
Virginia Green.....	Hickman.
Annie Gibson	Maury.
Eliza Tenton	McNairy.
Flora Bell	Knox.
Bettie Rains.....	Claiborne.
Maud Harlin	Hardin.
Lillie Byers... ..	Weakley.
Hester Sain.....	Hardeman.
Mattie Anderson.....	Robertson.
Jane Evil.....	Hamilton.
Mamie Harlin.....	Hardin.
Mary Moore.....	DeKalb.
Melinda Owen.....	Greene.
Mirusa Mynatt.....	Knox.
Robert Lloyd.....	Johnson.
Singleton B. Sikes	Obion.
Isaac P. Garrett.....	Fentress.
J. W. Hensley.....	Knox.

LIST OF PUPILS ENROLLED SINCE LAST REPORT,
DECEMBER 30, 1882—*Continued.*

NAME.	COUNTY.
W. E. Haynes.....	Sumner.
Thos. S. Marr.....	Davidson.
W. L. Youree	Sumner.
W. L. Brubaker.....	Greene.
J. W. Hembree.....	Cumberland
Chas. Myers.....	Shelby.
T. G. W. Holland.....	Humphreys
G. W. Sparkman.....	Warren.
J. M. Wann.....	Meigs.
Charles M. Wade	Knox.
Barlow Fisk.....	Overton.
E. Donahoe	Knox.
Jas. M. Johnson	DeKalb.
E. Scales.....	Carter.
Brice Denley.....	Gibson.
Thomas E. Hargrove.....	Giles.
Hiram Crabtree.....	Morgan.
Giles B. Owens.....	Obion.
John H. Young.....	Sumner.
Newton Warren.....	Jackson.
Henry Castleman.....	Davidson.
Henry M. Wilbanks.....	McNairy.
James H. Haney.....	Humphreys
Byron Boyd.....	Bledsoe.
Jesse T. Warren.....	Davidson.
George Cowell.....	Davidson.
James Davis.....	Knox.
Calvin S. Tenton.....	McNairy.
James Fowler... ..	Humphreys
Reuben Farbish.....	Shelby.
Joseph King.....	Maury.
Archie Sundidge.....	Hawkins.
Rufus Parker.....	Giles.

LIST OF PUPILS ENROLLED SINCE LAST REPORT,
DECEMBER 30, 1882—*Continued.*

NAME.	COUNTY.
John Ottinger.....	Cocke.
John Eggstein.....	Davidson.
John Brubaker.....	Greene.
Wiley B. Tanner.....	Perry.
Walter B. Rosson.....	Robertson.
William C. Pless.....	Franklin.
Charlie Pile.....	Anderson.
Willie B. Harlin.....	Hardin.
Willie B. Lovell.....	Davidson.
Columbus Swift.....	Smith.
Romulus Perry.....	Knox.
Fred Ringpfel.....	Davidson.
James M. Hail.....	Hawkins.
Robert Sneed.....	Davidson.
Ananias Cobble.....	McNairy.
John C. Hogg.....	Obion.
Elza Hurst.....	McNairy.
Elvin Sharp.....	Union.
Robt. E. Fish.....	Hawkins.
A. M. Justice.....	Greene.
Charles Allen.....	Jefferson.
Charles F. Faller.....	Davidson.
James H. Allen.....	Smith.
Lawrence Mynatt.....	Knox.
Thomas W. Rawlston.....	Hamilton.
Andrew J. Norris.....	Shelby.
Hiram E. Wagner.....	Mississippi.
Alfred M. Taylor.....	Perry.
Robt. H. Johnson.....	Knox.
Chas. E. Johnson.....	Bradley.
E. S. Jack.....	Dickson.
A. R. Odam.....	Cannon.
Andrew Brown.....	Morgan.

LIST OF PUPILS ENROLLED SINCE LAST REPORT,
DECEMBER 30, 1882—*Continued.*

NAME.	COUNTY.
McBlevin Key.....	Hamilton.
Robert E. Lee.....	Giles.
Daniel C. Watson.....	Knox.
Benjamin E. Brazelton.....	McNairy.
James S. Denney.....	Putnam.
Ernest T. Leonard	Sullivan.
Sherman Hoy.....	Carroll.
Charles Jackson.....	Davidson.
John W. Parkes.....	Maury.
Wm. T. Ozier	Carroll.
W. B. Watson.	Knox.
David O. Watson.....	Knox.
Aubrey A. Thomas.....	Coffee.
Levi Adkins.....	Scott.
William Smith.....	Roane.
Burton L. Ray.....	Loudon.
Dennis M. Ray.....	Loudon.
James S. Stillwell.....	Marshall.
Patton A. Hadden.....	Weakley.

STUDIES AND TEXT BOOKS.

CLASS No. 1—MR. D. C. HOMMEL.

Anatomy, Physiology and Hygiene....	Cutter
History of the World.....	Goodrich
History of England.....	Berard
Physical Geography.....	Mitchell
Grammar and Composition.....	Swinton
Arithmetic—Common School.....	Felter
Etymology and English Synonyms.....	Bailey
Object Lessons.....	Allyn
Penmanship.....	Spencerian System
Scripture Lessons.....	International Series

CLASS No. 2—MISS BETTIE DAVIS.

Arithmetic, New Intermediate	Felter
Physical Geography.....	Mitchell
Language Lessons.....	Swinton
Scholar's Companion	Baily
History of the World.....	Goodrich
Geography, Primary.....	Mitchell
School Stories.....	Keep
Exercises in Composition.....	Original
Penmanship	National System
Drawing.....	Krusi's Series

CLASS No. 3—MR. L. A. HOUGHTON.

Language Lessons.....	Jacob's Part Second
Geography.....	Mitchell's First Lessons
Arithmetic.....	Felter's Primary
Picture Teaching.....	Byrne
Composition	
Penmanship	

CLASS NO. 4—MRS. MARY H. IJAMS.

First Lessons for Deaf-mutes.....	Latham
Primary Reader for Deaf-mutes.....	Latham
Learning to spell.....	Jacob's Part First
First Lessons in numbers.....	Felter
First Lessons in Geography.....	Mitchell
Primary Arithmetic.....	Felter
Composition.....	

CLASS NO. 5—MR. W. O. BRANUM.

First Lessons for Deaf-mutes.....	Latham
Learning to spell.....	Jacob's Part First
Learning to spell.....	Jacob's Second Part
Object Lessons.....	
Composition	
Arithmetic.....	Addition and Subtraction

ORAL CLASS—MISS KATE R. OGDEN.

Arithmetic.....	Felter's Intermediate
Geography.....	Mitchell's Intermediate
History	Parley's
Grammar Graded Lessons	Reed and Kellogg
Composition	Jacob's
Reading and Definitions.....	Selections
Writing.....	Payson, Dunton & Scribner
Drawing	

3—Dumb.

COLORED DEPARTMENT.

PHYSICIAN'S REPORT.

Honorable President and Members of the Board of Trustees:

GENTLEMEN:—I have to report a gratifying healthfulness in the Colored Department. Few cases of sickness have occurred.

A year ago last summer we lost in this branch of the school a delicate, but interesting, girl—Robie Jones, of Overton county—after a lingering illness.

The removal of this department of the school a short distance into the country has, no doubt, had a favorable influence as a sanitary measure.

Respectfully,

JOHN M. BOYD, M.D., *Physician.*

PRINCIPAL'S REPORT.

At the time of our last report the school for colored mutes was located in a small rented school-house in East Knoxville, the pupils being boarded in another quarter, at some distance from the school building. This arrangement was continued until the close of the session in the summer of 1883.

During the vacation the property now occupied by this department, situated about one mile east of the city, was rented for two years with the privilege of purchase; and now, that the time has arrived for presenting the question of the future of this department to the General Assembly, I will restate the conditions upon which the property can be procured.

The proposition of the owners was to rent the property to us for two years, and to sell it for the sum of fifty-five hundred dollars

(\$5,500), in case the present Legislature would make the necessary appropriation for its purchase.

The property comprises twenty-seven (27) acres, most of which is good land. It is admirably adapted to gardening and grazing purposes, being well watered, and could be made to contribute considerably toward the support of the school.

The buildings are substantial brick structures, but will require some further expenditure for repairs and the addition of one or two rooms, after which they will afford ample accommodation to the school for years to come. Competent judges have estimated that we could not erect buildings that would serve our purposes as well as those now on the place for the amount of money required to pay for the entire premises.

Having made some repairs during the summer of 1883, at the opening of the fall session, the school was removed to this property and has since remained there, under the agreement to rent the place, pending the action of the Legislature in regard to the appropriation for its purchase.

I regard the continuance of the school in the present quarters as very desirable, and as the best arrangement that could be made. It is much more satisfactory, so far as the educational work is concerned, and is also more economical than the former arrangement in town—the whole expense, including rent, supplies, salary of teacher, clothing, etc., being met with about the same *per capita* outlay that was required in town for board and washing alone. In order to retain the present location it will be necessary to exercise the option to purchase, as the owners have been offered six thousand dollars for the property, in the event we do not purchase it; and it will be impossible to rent the premises beyond the time already agreed upon.

The property is certainly cheap at the price for which the State can obtain it under the option; and any money expended to make the needed repairs would add that much to the permanent value of the property.

ATTENDANCE.

The number of pupils admitted to the colored department, previous to our last report, was ten (10).

The total number admitted since that date is twenty-five (25).

There are seventeen (17) pupils now in attendance. The increased number of pupils will require a somewhat larger appropriation than we have heretofore received.

The general health of the pupils in this department has been excellent, though we have had the misfortune to lose one pupil with consumption, a bright, promising girl—Robie Jones, of Overton county.

The present location is, I think, a most healthful one.

Respectfully submitted,

THOMAS L. MOSES, *Principal.*

TREASURER'S REPORT.

1883.	DEBIT.
Jan. 1, To Balance on hand.....	\$ 400 00
Apr. 27, To Deficiency appropriation for 1882.....	2,500 00
June 18, To Annual appropriation for 1883.....	2,500 00
July 7, To Cash per E. C. Jones.....	2 00
1884.	
Apr. 4, To Annual appropriation for 1884.....	2,500 00
Sept. 29, To Cash from garden and sale of cow.....	137 89
	<hr/>
	\$8,039 89

1883.	CREDIT.
Jan. 25, By Cash paid Executive Committee.....	\$ 200 00
Mar. 2, By Cash paid Executive Committee.....	200 00
Apr. 2, By Cash paid Executive Committee.....	250 00
May 3, By Cash paid Executive Committee.....	1,600 00
July 7, By Cash paid Executive Committee.....	500 00
Oct. 4, By Cash paid Executive Committee.....	1,000 00
Nov. 1, By Cash paid Executive Committee.....	300 00
Dec. 1, By Cash paid Executive Committee.....	300 00
1884.	
Jan. 2, By Cash paid Executive Committee.....	300 00
Feb. 1, By Cash paid Executive Committee.....	300 00
Apr. 3, By Cash paid Executive Committee.....	300 00
May 2, By Cash paid Executive Committee.....	500 00
Aug. 2, By Cash paid Executive Committee.....	300 00
Oct. 9, By Cash paid Executive Committee.....	300 00
Nov. 11, By Cash paid Executive Committee.....	300 00
Dec. 8, By Cash paid Executive Committee.....	300 00
	<hr/>
	\$6,950 00
By Balance.....	1,089 89
	<hr/>
	\$8,039 89

Respectfully submitted,

S. B. BOYD, *Treasurer.*

REPORT OF EXECUTIVE COMMITTEE.

QUARTER ENDING MARCH 31, 1883.

1883.

DEBIT.

Jan. 1, To Balance on hand.....	\$ 95 16
Jan. 25, To Cash of Treasurer.....	200 00
Mar. 2, To Cash of Treasurer.....	200 00
Apr. 2, To Cash of Treasurer.....	250 00
	<hr/>
	\$ 745 16

CREDIT.

Mar. 31, By Board of pupils.....	\$ 427 50
Mar. 31, By Rent of school-house.....	30 00
Mar. 31, By Clothing.....	4 50
Mar. 31, By Fuel.....	6 00
Mar. 31, By House-furnishing.....	19 67
Mar. 31, By Drugs.....	1 50
Mar. 31, By Medical attendance.....	10 00
Mar. 31, By Transportation.....	21 35
Mar. 31, By Salary of teacher.....	150 00
	<hr/>
	\$ 670 52
Mar. 31, By Balance to next quarter.....	74 64
	<hr/>
	\$ 745 16

QUARTER ENDING JUNE 30, 1883.

DEBIT.

Apr. 1, To Balance	\$ 74 64
May 3, To Cash of Treasurer.....	1,600 00
July 7, To Cash of Treasurer.....	500 00
	<hr/>
	\$2,174 64

CREDIT.

June 30, By Salary of teacher.....	\$ 210 00
June 30, By Rent of school-house.....	30 00
June 30, By Board of pupils.....	333 50
June 30, By Clothing	56 55
June 30, By Drugs.....	10 24
June 30, By Medical attendance.....	58 00
June 30, By Repayment of loan.....	1,000 00
June 30, By Interest on loan.....	33 53
June 30, By Transportation.....	31 40
	<hr/>
	\$1,763 22
June 30, By Balance	411 42
	<hr/>
	\$2,174 64

QUARTER ENDING SEPTEMBER 30, 1883.

DEBIT.

July 1, To Balance	\$ 411 42
Oct. 4, To Cash of Treasurer.....	1,000 00
	<hr/>
	\$1,411 42

CREDIT.

Sept. 30, By Supplies.....	\$ 110 50
Sept. 30, By Sickness and burial of Robie Jones.	30 00
Sept. 30, By Repairs	290 10
Sept. 30, By House and kitchen-furnishing.....	321 94
Sept. 30, By Salaries and wages	191 05
Sept. 30, By Janitor at old school-house.....	20 00
Sept. 30, By Fuel	9 00
Sept. 30, By Transportation	41 75
Sept. 30, By Drayage and livery.....	22 00
Sept. 30, By Medical attendance	40 00
Sept. 30, By Drugs.....	20 96
Sept. 30, By Tools	5 85
Sept. 30, By Incidentals.....	3 75
	<hr/>
	\$1,106 90
Sept. 30, By Balance.....	304 52
	<hr/>
	\$1,411 42

QUARTER ENDING DECEMBER 31, 1883.

DEBIT.

Oct. 1, To Balance	\$ 304 52
Nov. 1, To Cash of Treasurer.....	300 00
Dec. 1, To Cash of Treasurer	300 00
1884.	
Jan. 2, To Cash of Treasurer	300 00

\$1,204 52

CREDIT.

Dec. 31, By Rent.....	\$ 75 00
Dec. 31, By Salary of teacher	90 00
Dec. 31, By Fuel and lights	74 75
Dec. 31, By Cow purchased.....	35 00
Dec. 31, By Care of Robie Jones.....	30 00
Dec. 31, By House-furnishing.....	52 51
Dec. 31, By Drugs and medical attention.....	22 45
Dec. 31, By Clothing and dry goods.....	75 15
Dec. 31, By Stationery.....	2 35
Dec. 31, By Incidentals	6 65
Dec. 31, By Conveyance and drayage	14 50
Dec. 31, By Transportation.....	13 05
Dec. 31, By Labor and wages.....	101 17
Dec. 31, By Cemetery lot and deed.....	13 00
Dec. 31, By Supplies	332 75

\$ 938 33

Dec. 31, By Balance.....	266 19
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\$1,204 42

QUARTER ENDING MARCH 31, 1884.

DEBIT.

Jan. 1, To Balance.....	\$ 266 19
Feb. 1, To Cash of Treasurer.....	300 00
Apr. 3, To Cash of Treasurer.....	300 00
	<hr/>
	\$ 866 19

CREDIT.

Mar. 31, By Supplies.....	\$ 257 77
Mar. 31, By Salaries and wages.....	178 00
Mar. 31, By Clothing and dry goods.....	50 22
Mar. 31, By Repairs.....	5 25
Mar. 31, By Seeds.....	18 93
Mar. 31, By House-furnishing.....	7 65
Mar. 31, By Drayage and livery... ..	7 00
Mar. 31, By Fuel.....	60 00
Mar. 31, By Rent.....	75 00
Mar. 31, By Incidentals.....	1 85
	<hr/>
	\$ 661 67
Mar. 31, By Balance	204 52
	<hr/>
	\$ 866 19

QUARTER ENDING JUNE 30, 1884.

DEBIT.

Apr. 1, To Balance.....	\$ 204 52
May 2, To Cash of Treasurer.....	500 00
	<hr/>
	\$ 704 52

CREDIT.

June 30, By Supplies	\$ 167 76
June 30, By Salary and wages.....	175 15
June 30, By Rent	75 00
June 30, By Tools and repairs.....	7 14
June 30, By Seeds	4 90
June 30, By Medical attention.....	4 00
June 30, By Clothing.....	13 78
June 30, By House-furnishing.....	3 10
June 30, By Livery and hauling.....	13 50
June 30, By Transportation.....	43 50
June 30, By Incidentals.....	4 60
	<hr/>
	\$ 512 43
June 30, By Balance	192 09
	<hr/>
	\$ 704 52

QUARTER ENDING SEPTEMBER 30, 1884.

DEBIT.

July 1, To Balance	\$ 192 09
Aug. 2, To Cash of Treasurer.....	300 00
Oct. 9, To Cash of Treasurer	300 00
	<hr/>
	\$ 792 09

CREDIT.

Sept. 30, By Supplies	\$ 79 47
Sept. 30, By Repairs.....	56 95
Sept. 30, By Transportation.....	57 05
Sept. 30, By Salary and wages.....	167 05
Sept. 30, By Medical attention.....	6 00
Sept. 30, By Cow purchased.....	40 00
Sept. 30, By Clothing and merchandise.....	18 00
Sept. 30, By House-furnishing.....	12 00
Sept. 30, By Fuel	21 20
Sept. 30, By Incidentals and labor.....	10 00
Sept. 30, By Rent.....	75 00
	<hr/>
	\$ 542 73
Sept. 30, By Balance.....	249 36
	<hr/>
	\$ 792 09

QUARTER ENDING DECEMBER 31, 1884.

DEBIT.

Oct. 1, To Balance.....	\$ 249 36
Nov. 11, To Cash of Treasurer.....	300 00
Dec. 8, To Cash of Treasurer.....	300 00
	<hr/>
	\$ 849 36

CREDIT.

Nov. 30, By Supplies for October and November.....	\$ 196 70
Nov. 30, By Clothing and merchandise.....	52 06
Nov. 30, By Livery and hauling.....	9 00
Nov. 30, By House-furnishing.....	1 80
Nov. 30, By Fuel.....	52 50
Nov. 30, By Transportation.....	1 75
Nov. 30, By Rent.....	75 00
Nov. 30, By Repairs.....	18 90
Nov. 30, By Drugs.....	5 00
Nov. 30, By Salary and wages.....	142 85
	<hr/>
	\$ 555 56
Nov. 30, By Expenditures for December estimated.....	275 00
	<hr/>
	\$ 830 56
Nov. 30, By Estimated balance.....	18 80
	<hr/>
	\$ 849 36

Respectfully submitted,

JNO. S. VAN GILDER,
WM. K. ECKLE,
S. B. BOYD,

Executive Committee.

**PUPILS ENROLLED IN COLORED DEPARTMENT
SINCE REPORT DECEMBER 31, 1882.**

NAME.	COUNTY.
Eugene Watson.....	Davidson.
Willie Suddath	Roane.
Robert Suddath.....	Roane.
William Ridley.....	Crockett.
Thomas Boswell.....	Carroll.
Robie Jones.....	Overton.
Charles Alexander.....	Knox.
Robert T. Craighead.....	Davidson.
Robert Gill.....	Rutherford.
Joseph Forgy.....	Hawkins.
John Forgy.....	Hawkins.
John Goodman.....	Knox.
Ella McCain.....	Tipton.
Willis Davis.....	Shelby.
James Forgy.....	Hawkins.
Ann Eckel	Hamblen.
Alex. Johnsen.....	Roane.
Leanna Johnson	Roane.
Sallie Johnson	Roane.
Francis Tillman.....	Knox.
Thos. Garrett.....	Sevier.
Belle Garrett	Sevier.
Ernest Trent.....	Hamilton.
William Jackson.....	Hamilton.
Martha Trundles.....	Sevier.

LIST OF STUDIES AND TEXT BOOKS

OF

PUPILS IN COLORED DEPARTMENT.

MR. MATT. R. MANN, TEACHER.

First Lessons for Deaf-mutes.....	Latham
Primary Reader for Deaf-mutes.....	Latham
Learning to spell.....	Jacob's
Arithmetic, First Lessons.....	Felter
Arithmetic, Primary.....	Felter
Grammar, Graded Lessons.....	Reid & Kellogg
Scripture Lessons.....	
Writing and Composition.....	



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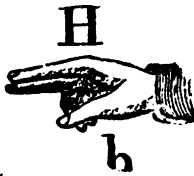
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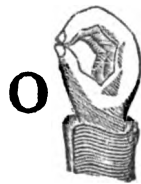
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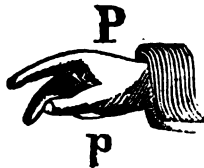
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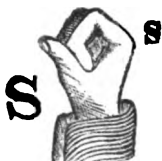
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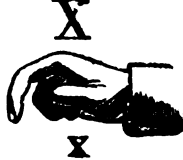
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REPORT
OF THE
ADJUTANT GENERAL OF THE STATE,
—TO—
HIS EXCELLENCY WM. B. BATE, GOVERNOR.
DECEMBER 13, 1884.

REPORT.

To His Excellency, WM. B. BATE, Governor of the State of Tennessee :

SIR: I have the honor to report to Your Excellency that upon assuming the duties of Adjutant General, something near two years since, I, at the earliest practical moment thereafter, made a personal inspection and examination of the State's Armory and military equipments, and found the same in endless confusion. There seemed to have been no regard for this valuable and costly property of the State. The various articles and stores were scattered about with no order and no special place for any particular article. An examination of the laws for something directory to me in the management of the department, proved of no avail, as upon this question the laws were almost silent. I then looked to the appropriation to the department in the hope of being able to accomplish something at least by way of bringing some degree of order out of the mass of confusion found, as some expense must necessarily accrue upon the execution of any contemplated work. I only found one hundred dollars (\$100), not enough to undertake any work. Notwithstanding this state of facts, however, by devoting such spare time as I have been able to command from my additional duties as Secretary to the Governor, to the work of classifying and arranging the department, which has been done without money, and mainly with the help of Mr. Dantel, the landscape gardener of the capitol grounds. Much has been done, but I am still unable to report with any degree of accuracy the number of guns, or to give a tabulated amount and condition of this character of property belonging to the State, much of it being scattered about over the State, that I am unable to have reports of, or collect, by reason of no laws to enforce, and no money to bear expense. Since in office there has been added to this department, upon my application to

the War Department at Washington, one Gatling gun, two 3-inch Parrott guns, and a small mountain howitzer with equipments. Have equipped several other guns, and have several hundred new regulation infantry guns, with equipments and ammunition, besides other smaller articles. The armory at times, like the remainder of the building, is damp, and consequently causes mildew and rust. To obviate this, cases should be made suitable for packing different articles, properly distributed and labeled, and provision should be made for cleaning at certain intervals, so as to preserve this property. Provision should also be made by which the scattered arms and equipments could be ascertained, returned to the armory, cleaned and properly preserved. If wholly unserviceable, as is the case with some, they should be disposed of and the place given to others, all of which should be kept serviceable and in good order.

We have a number of military companies and several military schools in the State; some of them in good organization, others not. Some laws should be enacted that would require them all to come to a common standard, and they should be subjected at regular intervals to inspection by the proper State officer. The companies, though not regularly in the service of the State, stand ever ready to respond to a call by the State, and therefore deserve some recognition and encouragement from the State.

I trust Your Excellency will recommend to the Legislature an investigation of this department, and such legislation in the premises as will collect and preserve the interests involved.

All of which is most respectfully submitted by your obedient servant,

R. W. CANTRELL,
Adjutant General.

REPORT
OF THE
SUPERINTENDENT OF THE CAPITOL,
—TO—
HIS EXCELLENCY WM. B. BATE, GOVERNOR.
DECEMBER 19, 1884.

REPORT.

To His Excellency, WM. B. BATE, Governor of the State of Tennessee :

SIR: I have the honor to submit herewith my report as superintendent of the capitol building, grounds, etc. The last General Assembly appropriated \$500 to repair the roof, walks on same, and to paint the tower. The said repairs on the roof and painting were done, the walk from the south end to the tower was made entirely new, but shortly thereafter it was torn completely off by a severe storm, requiring additional expense to replace it. This work exhausted the appropriation thus made. The same General Assembly appropriated \$300 to make a gas sewer or escape from the water closet, and for other repairs to this part of the building. This work was done as directed under the supervision of the Secretary of the State Board of Health, and exhausted this appropriation. The vouchers for the payments made under these two appropriations are on file in the comptroller's office. The water supply is and has been very unsatisfactory and unreliable for five or six months during the past summer and fall, and now we have no water at the building from the city reservoir, our entire supply being brought by hand from hydrants in the lower part of the city, which is a great inconvenience. The cisterns should be repaired. They leak badly. I have found it necessary in order to keep the building in proper repair, especially the heating and lighting departments, to incur the indebtedness indicated by the two bills herewith submitted:

Phillips, Buttorf & Co.....	\$ 69 25
Ryan & Shea.....	37 60

\$106 85

The appropriation for repairs, etc., having been exhausted, these bills remain unpaid.

The proper care and attention to the building and grounds require an additional porter and a day watchman. The three porters now employed are kept constantly busy, and are unable to keep the building clean. The great number of visitors to the grounds and building at all times make it necessary that an efficient day watchman be employed. Nuisances are constantly committed, and the

building daily defaced and abused for the want of such watchman. Mr. Malloy, the night watchman, is most efficient and attentive, and looks well to every interest of the place while he is on duty, and is of greatly more value to the State than the small wages paid him. His services are worth more than he receives (\$30 per month). He comes on duty at 5 o'clock p. m. and remains until 6 o'clock a. m. As much is now done in this matter as is practicable with the force at command, and the increased force suggested is urged as a necessity.

Notwithstanding what has been done, it has not been enough to preserve the building. The roof still leaks, and needs overhauling and to be thoroughly repaired as a matter of self-preservation. The water closet is still in a bad condition, and a source of unhealthfulness to the building. Something should be done to suppress, if possible, the gas that comes through it into the building, from the sewers of the city below that connect with the sewer to this, and through which passes, by reason of the elevation, these gases into and through the building.

The entire building is greatly in need of repairs, and should receive the earnest consideration of the General Assembly, both because for self-preservation, and to present to the general public an appearance in keeping with its magnitude. The building and grounds are too imposing and valuable to be allowed to rust or decay.

The last General Assembly only appropriated \$5,000, or \$2,500 per annum to capitol expense account, which amount included everything, fuel, lights, porters' hire, night watchman, gardener, and all other incidental expense. The several items, night watchman, porters and gardener, amount to \$1,980 per annum, leaving only \$520 for all other necessary contingent expenses. This, it will be clearly seen, does not, and can not, meet the demands of the situation. It would be practice of a best possible oconomy for the State to put the building once in good condition and require that it shall be so kept. The appropriation made last session has been most economically and judiciously expended, and for all of which expenditures vouchers are filed with the Comptroller.

With great respect, your obedient servant,

HAYDEN MARCH,

Superintendent of Capitol and Capitol Grounds.

December 19, 1884.

REPORT
OF THE
Commissioners of the Watkins Institute,
TO THE
GOVERNOR OF THE STATE OF TENNESSEE.
JANUARY 1, 1885.

REPORT.

To His Excellency WM. B. BATE, Governor of the State of Tennessee:

SIR: The commissioners of the Watkins Institute, located in the city of Nashville, beg leave to make the following report of their action under the will of the late Samuel Watkins and the law of the State accepting the trust for the State and appointing the undersigned to administer the trust under the said will and statute:

The commissioners took possession of the lot situated on Church street, in the city of Nashville, about October 1, 1881, after the death of Mr. Watkins, and as soon as practicable thereafter, sold the old house and such other buildings as were on the same, the proceeds of which will be found in the financial statement hereto attached. We advertised, with specifications of the size and character of the buildings desired, in the American Architect and Building News, Boston, and other papers, inviting architects to present plans and estimates for the buildings indicated, offering premiums as follows: for the plan adopted, or best plan, \$300; for second best, \$150, and for third best, \$75. There were six plans presented, and upon full consideration of all the plans, the one presented by Bruce & Morgan, of Atlanta, Ga., was accepted.

Specifications for the execution of said plan in detail were drawn up and printed in pamphlet form, and published in sundry papers, inviting proposals for the various work contemplated and necessary to be done in the construction of the building. At the time indicated in the advertisement for the coming in of bids, we had before us propositions for all the work indicated, and proceeded at once to adopt such bids as we thought most advantageous, all of which are on file with the papers and records of said Institute.

After the contracts were let, work of construction was commenced, and has been pushed as rapidly as well could be done. Messrs.

Bruce & Morgan were appointed architects, with a contract fixing their compensation. All the contracts are subject to the inspection of your Excellency, or such committee as the Legislature may appoint.

The house on Church street consists of four stores with basements; the stores being 100 feet deep by about 23 feet wide. The upper stories are cut up into rooms suitable for families or offices, and are all occupied at a reasonable rental. There are but two of the stores rented. The rental received for all will be seen by reference to the financial statement. The library is a building in rear of the stores, 112 feet deep by 75 feet wide. The first story is the library proper ; the second the main public hall, which is approached from Church street through a corridor and over a bridge that connects the library building and public hall and stores together. The library and public hall also have an approach from High street.

It will also be seen by reference to the financial statement what money has been received from every source, and what interest has been received on the funds while remaining idle in our hands. It will also be seen what amount has been expended and for what purpose, and the amount yet due on original contracts, and the means with which we have to pay the same. It will be seen that while the building in a general sense is nearly completed, yet there is much to do to prepare it for the uses contemplated, such as heating, seating and book stands or cases, and ornamentations in the library and other departments, and to complete the same we will have to rely upon the rents, which we think in a reasonable time will be sufficient. We trust we have used the means at our disposal for the best, in the erection of a building creditable to the donor and the State, and that it will prove a blessing to the whole community.

It is proper that we should add that as soon as the building is complete we will endeavor to inaugurate such means and appliances for the education and improvement of the people as were contemplated by the donor in making provision for their benefit. While it is true that we will have to rely on the rents of the building in its various departments for the means of finishing, furnishing and ornamenting the same, we have reasonable hopes that some lovers of our race, whom the Lord has blessed and prospered, will find it in their hearts to make donations that will enable us to enlarge and improve

the capacity of the Institute for good. We have reason to hope before we shall be called on to make another report to your Excellency, in 1887, that the Institute, though weak and unorganized now, will be fully equipped, and will be dispensing blessings to all the people of the State. We have a few books, say a few hundred volumes that have been given to us by the executors of our fellow-citizen, Francis B. Fogg, and the heirs of W. B. Tabor. We also are glad to acknowledge the kindness done us and the public by the Hon. Howell E. Jackson, in the donation of a large number of public documents, amongst which is the census of 1880, which we regard as a valuable acquisition to the Institute.

We expect as soon as practicable to inaugurate lectures suitable for the instruction and improvement of the mechanical and other arts and trades, such as Mr. Watkins, in his munificence, intended to encourage. We do not feel authorized to promise much under the circumstances, yet all great enterprises had a beginning, and though the Institute is now poor and small, it may, and we trust will, by the help of philanthropic and patriotic men, in the near future, grow into such proportions that it will not only be felt in this city and State, but in other States and cities of the Union.

We would be pleased that your honorable body would appoint a committee to examine this statement and report thereon, if for nothing else that an official relation may exist between the commissioners and the State through the Legislature and yourself.

FINANCIAL STATEMENT OF WATKINS INSTITUTE.

RECEIPTS.

1881.		
June 28.	Cash received of Issac Litton, executor.....	\$50,000 00
Aug. 13.	Cash received of Isaac Litton, executor.....	35,000 00
Dec. 23.	Cash received of Isaac Litton, executor.....	6,554 00
1882.		
July 11.	Cash received of Isaac Litton, executor.....	246 00
July 11.	Two Kelley notes received of Isaac Litton, executor.....	8,200 00—\$100,000 00
1881.		
Oct. 1.	Cash, sale of house and stone on lot.....	690 00
1884.		
July 3.	Cash, interest on fund while in hands of commissioners.....	6,508 93
1885.		
Jan'y 1.	Cash, rents to date.....	3,033 59
Jan'y 1.	Cash, interest in full on Kelly notes.....	1,491 86— 11,724 38
		<u>\$111,724 38</u>

DISBURSEMENTS.

Advertising.....	\$ 84 85
Books, stationery, etc.....	69 00
Architects, Bruce & Morgan.....	2,745 00
Brick work, W. G. Bush & Co.....	20,375 35
Pavements, Haslam Bros.....	1,393 60
Cut stone work, P. Swan.....	14,536 00
Galvanized iron and tin, Webb, Steven- son & Co.....	7,531 65
The Wight Fire-proofing Company.....	2,416 87
Asphalt pavements and floors, W. W. Woodmansee & Co.....	600 00
Carpenter and joinery works, Simmons & Phillips.....	13,832 50

Iron pillar and door, Stewart & Buckner	74 00
The Merz Architectural Iron-works Co...	13,663 85
Insurance.....	1,445 00
Excavation and rubble masonry, Williams & Jones.....	13,309 32
Plumbing and gas-fitting, J. L. Park.....	1,725 75
Painting and glazing, W. B. Wallwork...	4,505 00
Plastering, Wm. Corbitt & Son.....	4,131 50
Expense, janitor's salary, commission, etc.	1,615 65
Prizes for plans.....	500 00
Cash in Fourth National Bank, Jan. 1, 1885.....	7,169 49—\$111,724 38

AMOUNT DUE CONTRACTORS WHEN WORK IS COMPLETED.

Carpenter and joinery works, Simmons & Phillips.....	\$ 6,685 00
Plumbing and gas-fitting, J. L. Park.....	309 00
Painting and glazing, W. B. Wallwork..	620 00
Plastering, Wm. Corbitt & Son.....	395 00—\$ 8,009 00

This is a short, but we trust an intelligent, showing of the Institute and its affairs to January 1, 1885.

Very respectfully,

JAMES WHITWORTH, *Pres't.*

JOHN M. LEA,

W. F. COOPER,

Commissioners.

REPORT
OF THE
Commissioners of the Jackson Statue,
TO THE
FORTY-FOURTH GENERAL ASSEMBLY.

REPORT.

To the General Assembly of the State of Tennessee :

The undersigned were appointed commissioners to superintend the erection of a marble or granite base for the equestrian statue of Gen. Andrew Jackson, the sum of \$2,000 being appropriated for that purpose by the thirtieth section of an Act of Assembly passed the 6th day of April, 1881.

The money was not drawn from the treasury, and the execution of this trust was intentionally delayed in the hope that the last General Assembly would enlarge the appropriation, the presumption being that \$2,000 was a sum inadequate to remove and replace the statue, and, also, in addition, defray other costs and charges necessarily attendant upon the substitution of another pedestal. This expectation was not realized, and, though the wooden structure showed no signs of decay, and might for some years have sustained the incumbent weight, upon a conference held by the undersigned commissioners, it was resolved that we should proceed with such means as were at our disposal in the discharge of the trust with which we had been honored. On the 6th day of October, 1883, a contract was entered into with Mr. P. Swan, of the city of Nashville, who, for the sum of \$2,000, agreed to remove and replace the statue, build foundation, furnish all labor and materials, and erect a marble base according to a design presented by him and acceptable to the commissioners. The contract, and also the receipt of said Swan for the money, accompany this report in a separate paper marked "exhibit A," and are herewith presented to

your honorable body. An examination of the agreement will show that the payment of the money, and the acceptance of the work by the commissioners do not immediately release the contractor from liability in case time should disclose any defective workmanship, there being a stipulation which operates as a continuing guaranty, that the pedestal shall remain firm and stable, and possess a durability equal to the base under a similar statue standing on the capitol grounds in the city of Washington. The height and width of pedestal, length and breadth of marble slab on top, and other dimensions correspond almost entirely with the dimensions of the base on which rests the statue of equal weight in Washington.

The contract was, in our opinion, faithfully carried out, except in one small instance, which does not in any degree affect the strength or durability of the work—the letters which compose the name Jackson should have been carved on one single piece of marble as was expressly specified in the contract. In consideration, however, of the excellent manner in which the work, with this exception, was performed, we did not consider that this inadvertence or oversight on the part of the contractor was cause sufficient to justify or require us to withhold any part of the price agreed to be paid, especially as the contract was barely remunerative and involved a heavy responsibility, the penalty for any damage being stipulated at the sum of \$10,000. There was a necessity, of course, to separate the figures into their original segments, a most difficult and delicate labor, in the performance of which our home mechanics had hitherto had no experience, but, we are glad to report, the task was successfully accomplished, and the segments afterwards rejoined, neither figure sustaining any injury or damage whatsoever.

Allow us to say, in conclusion, that upon a view of the pedestal, after all the work had been completed, we rather felicitated ourselves that the appropriation had not been of any greater magnitude. The work is plain but substantial, and sufficiently massive; not subject to criticism, because there is no attempt to display, while, had larger means been at our disposal, the ornamentation might have been excessive, or, perhaps, conceived in bad taste. The statue as a work of art has incurred some measure of criticism; whether justly or unjustly matters not to the people of Tennessee, who will look upon this conception of the artist as an effort to symbolize the greatness of one who was no less distinguished in peace than in war.

"Recorded honors" shall gather around the tomb of Jackson, and his name and fame will live in history, when any structures or monuments in bronze or marble sacred to his memory, shall have crumbled into dust.

Respectfully submitted,
T. W. DICK BULLOCK,
Chairman.

W. P. JONES,
HORACE H. HARRISON,
D. A. NUNN,
JOHN M. LEA.

CONTRACT.

This article of agreement witnesseth :

WHEREAS, the General Assembly of the State of Tennessee appropriated the sum of \$2,000 for the purpose of erecting a marble or granite base for the statue of General Jackson upon the capitol grounds, reference to which act of appropriation, being the thirtieth section of an Act passed the 6th day of April, 1881, is hereby made, the same to be considered as a part of this instrument.

Now, the undersigned, P. Swan, agrees at his own cost and charge to erect or build said base within the next six months, the dimensions thereof to be of size, etc., as indicated on a paper hereto annexed, marked Exhibit A, to be also taken as a part of this agreement. The said Swan agrees to take down the statue, build foundation for the base sufficiently strong to sustain the superstructure and the statue thereon, to replace the statue on the pedestal, and all this work to be done in a manner as substantial as the work, and to be of as great permanence, as the base on which the Jackson statue in Washington rests. He further covenants that he will take down and replace the statue without any damage to it, or, in other words, guarantees that no damage shall happen to it during the progress of the work, and that the base shall be sufficiently strong to sustain the statue for an indefinite time, or, for instance, in the way and

manner that the statue at Washington has been for so long, and is now, sustained by the base placed there, binding himself for the performance of these covenants in the sum of \$10,000.

[A paper marked Exhibit B is made a part of this instrument.]

When all the work is satisfactorily done, the undersigned, T. W. Dick Bullock, Chairman of the committee, agrees to pay said Swan \$2,000, and for any failure on the part of Swan to perform the aforesaid covenants, suit may be brought by said Bullock as Chairman for the use of the State of Tennessee.

Witness our hands, October 20, 1883.

P. SWAN.

T. W. DICK BULLOCK,

Chairman of the committee appointed by the Legislature.

EXHIBIT A TO CONTRACT.

Dated 20th October, 1883, between P. Swan and T. W. Dick Bullock, Chairman.

NASHVILLE, TENN., October 15, 1883.

Mr. John M. Lea:

DEAR SIR—I will complete pedestal for Jackson statue of Knoxville mable as per sample in your office as per design shown, and of the following dimensions :

Lower base.....	15 ft. 4 in.	x	9 ft. 6 in.	x	1 ft. 4 in.
Second base.....	13	2	x	7	4 x 2 0
Molding under die.....	12	2	x	6	2 x 0 9
Die.....	11	6	x	5	6 x 7 0
Cap on die.....	13	2	x	7	4 x 2 0
Top block.....	11	6	x	5	6 x 0 11

Total height.... 14 ft. 0 in.

Will build suitable foundation for pedestal; will also guarantee the safe transfer of statue from present pedestal to marble one and complete the whole work in a good and workmanlike manner for the sum of \$2,000.

P. SWAN.

EXHIBIT B.

The average thickness of marble on the die is to be five inches ; and a long space on one slab is to have in raised letters the word " Jackson."

Received from T. W. Dick Bullock, by the hands of John M. Lea, \$2,000 in full for all work as per contract done in and about the erection of base for Jackson statue. The payments were made at different times as the work progressed, and this acknowledgment is made for the purpose of embodying all receipts into one.

P. SWAN.

October 1, 1884.

UNIVERSITY OF MICHIGAN



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